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AUTHOR	Seppanen, Patricia; And Others
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ABSTRACT

A national survey of state-articulated student goals and outcomes led to the analysis of documents from 30 states for correspondence with the outcomes specified for grade 8 in the conceptual model developed by the National Center on Educational Outcomes for Students with Disabilities (NCEO). All of the 30 states' goal documents included statements that corresponded to the NCEO outcome domain of Academic and Functional Literacy. Fifty to 75 percent of the states specified goals that corresponded to Presence and Participation, Responsibility and Independence, Contribution and Citizenship, and Personal and Social Adjustment. Few states identified goals matched to Accommodation and Adaptation or to Satisfaction. Correspondence at the outcome and indicator levels also varied, though weak correspondence may have been more due to the degree of specificity used by states than a lack of conceptual congruence with the NCEO model. Charts and graphs compare the congruence at the levels of domains, outcomes, and indicators for the following states: Arkansas, California, Colorado, Delaware, District of Columbia, Florida, Hawaii, Idaho, Illinois, Indiana, Kansas, Kentucky, Maryland, Michigan, Montana, Nebraska, New Hampshire, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Utah, Virginia, Washington, and West Virginia. Reports of the document analysis done for each of these states are provided. (DB)

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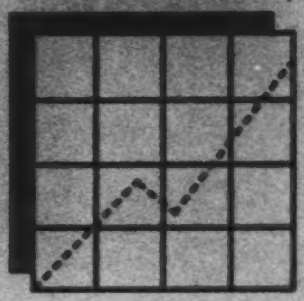

Matching State Goals to a Model of Outcomes and Indicators for Grade 8

National Center on Educational Outcomes

The College of Education and Human Development
UNIVERSITY OF MINNESOTA

in collaboration with

St. Cloud State University
and
National Association of State Directors of Special Education

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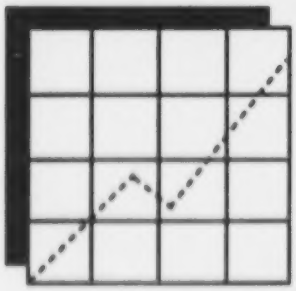

Matching State Goals to a Model of Outcomes and Indicators for Grade 8

Prepared by:
Patricia Seppanen, Nicole R. Julian, and Rod Schaefer

National Center on Educational Outcomes

The College of Education and Human Development
UNIVERSITY OF MINNESOTA

October, 1995

The National Center on Educational Outcomes (NCEO) was established in October, 1990 to work with state departments of education, national policymaking groups and others to facilitate and enrich the development and use of indicators of educational outcomes for students with disabilities. It is believed that responsible use of such indicators will enable students with disabilities to achieve better results from their educational experiences. The Center represents a collaborative effort of the University of Minnesota, the National Association of State Directors of Special Education and St. Cloud State University.

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NCEO Core Staff:

Robert H. Bruininks
Judy L. Elliott
Ron Erickson
Patricia Grafstrom
Kevin S. McGrew
Dorene L. Scott
Patricia Seppanen
Martha L. Thurlow
James E. Ysseldyke

Additional copies of this report can be obtained for **$20.00**. Please write:

Publications Office
NCEO
348 Elliott Hall
University of Minnesota
75 East River Road
Minneapolis, MN
55455

Overview

In 1990, the President and governors of the United States agreed upon six national education goals. Their purpose was to help improve the quality of education by setting high standards and focusing on how well our society is able to achieve them. The original six goals (and two others) have become part of education reform law and at least ten different standards-setting groups have been working to set out guidelines of what U.S. students should know and be able to do. The passage of the *Goals 2000: Educate America Act*, along with other education reform initiatives such as the *School to Work Opportunity Act* and the *Improving America's Schools Act* (the former *Elementary and Secondary Education Act*) are designed to further stimulate standards-based assessment and reform in schools across the nation.

States have been following closely on the heels of these national reform initiatives. Within six months of announcing the national educational goals, 18 states had announced their own versions of the goals, and within one year 44 states had done so. Many states have gone on to articulate learner outcomes, objectives, performance standards, and benchmarks/indicators. And, building on the Goals 2000 work, most states are now using language that includes *all* students in their educational reforms, including students with disabilities.

At the same time that these reforms were initiated, the National Center on Educational Outcomes for Students with Disabilities (NCEO) began its work by identifying a conceptual model of outcomes and indicators appropriate for all students, including students with disabilities (Figure 1). Using a multi-attribute, consensus-building approach (Vanderwood & Ysseldyke, 1993), hundreds of stakeholders from a variety of perspectives (including national reformers, special educators, school administrators, teachers, parents, measurement experts, legislators, and representatives of advocacy groups) contributed to the articulation of eight major outcome domains.

The model articulates outcomes and indicators at key stages in a student's development: age 3, age 6, grade 4, grade 8, school-completion, and post-school. In Figure 2, the specific outcomes within each domain are provided for the grade 8 level. Possible indicators of each outcome have also been identified. The overall design, from domain to outcomes to indicators, is shown in Figure 3 on the following page.

One of NCEO's activities is to check the extent to which there is correspondence between state articulated student outcomes and the outcomes specified in the NCEO conceptual model. This matching activity also gives us the opportunity to present an inventory of the outcomes and indicators that have been articulated by each state at the grade 8 level. We believe this information will be useful to state and local level practitioners involved in the articulation of educational goals, performance standards, assessments, and curriculum frameworks at different age and grade levels.

Figure 1. NCEO Conceptual Model of Education Outcomes

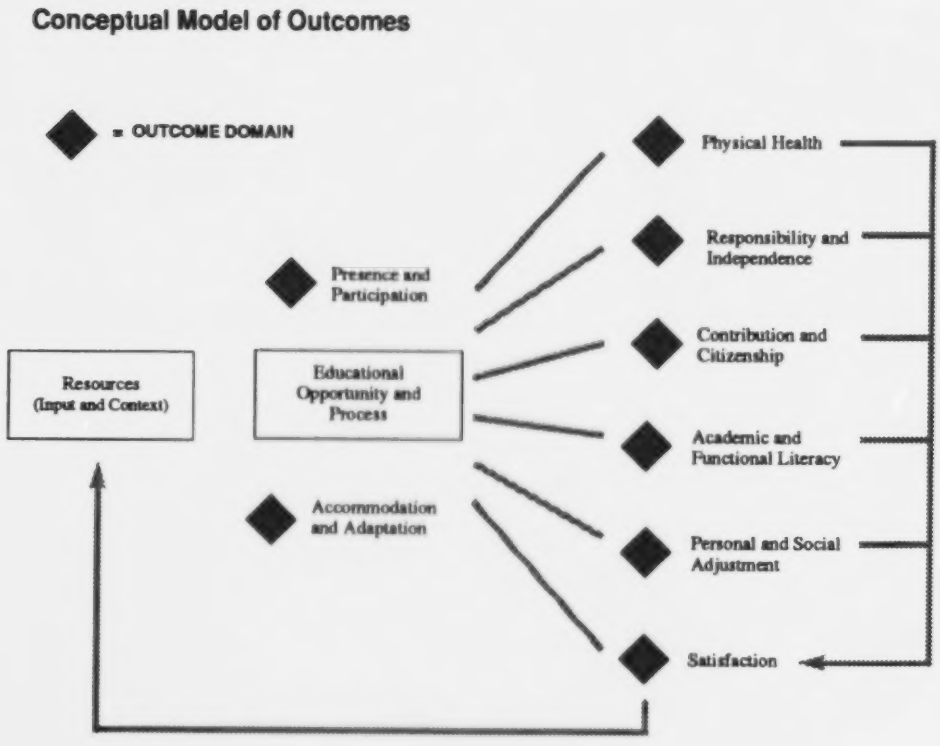
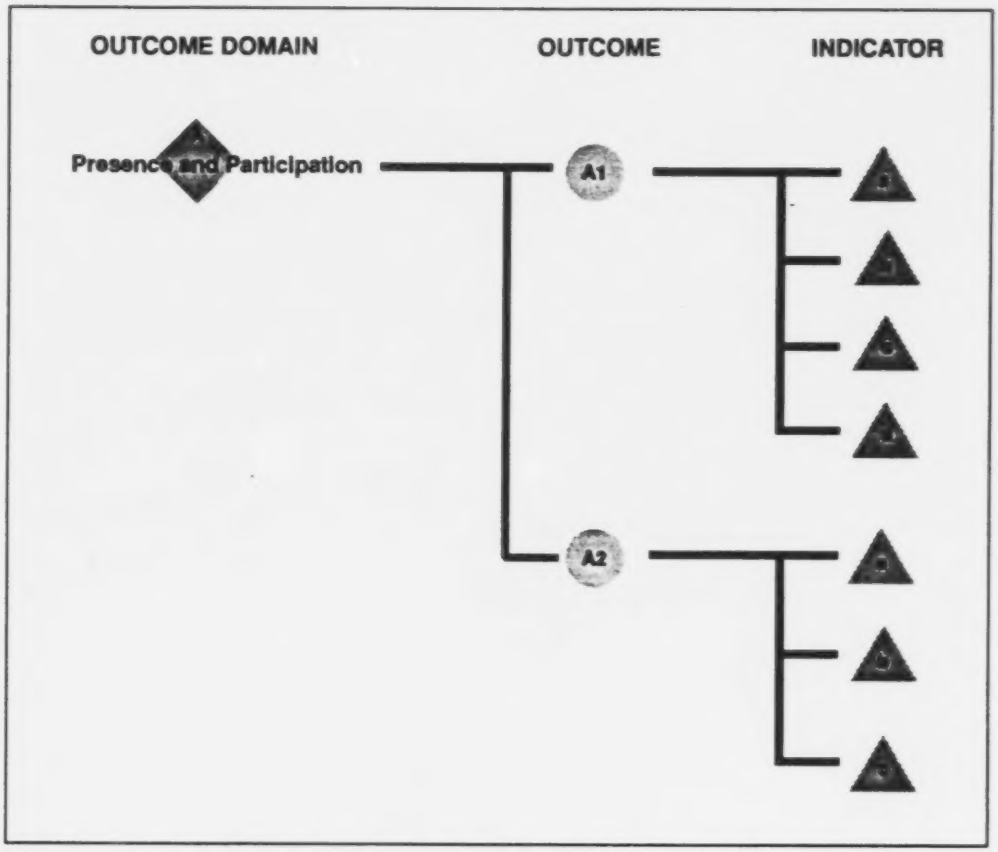


Figure 2. NCEO Outcome Domains and Outcomes for Grade 8

OUTCOME DOMAIN	OUTCOME
A. Presence and Participation	A1. Is present in school A2. Participates
B. Accommodation and Adaptation	B1. Uses enrichments, adaptations, accommodations, or compensations necessary to achieve outcomes in each of the major domains B2. Demonstrates the presence of family
C. Physical Health	C1. Makes healthy lifestyle choices C2. Is aware of basic safety, fitness, and health care needs C3. Is physically fit
D. Responsibility and Independence	D1. Demonstrates age-appropriate independence D2. Gets about in the environment D3. Is responsible for self
E. Contribution and Citizenship	E1. Complies with school and community rules E2. Knows the significance of voting E3. Volunteers
F. Academic and Functional Literacy	F1. Demonstrates competence in communication F2. Demonstrates competence in problem solving strategies and critical thinking skills F3. Demonstrates competence in math, reading, and writing skills F4. Demonstrates competence in other academic and nonacademic areas F5. Demonstrates competence in using technology
G. Personal and Social Adjustment	G1. Copes effectively with personal challenges, frustrations, and stressors G2. Has good self image G3. Respects cultural and individual differences G4. Gets along with other people
H. Satisfaction	H1. Student satisfaction with school experience H2. Parent/guardian satisfaction with education that student is receiving H3. Community satisfaction with education that student is receiving

Figure 3. Design of Domains, Outcomes, and Indicators in Model



Method

The process of matching the educational goals, outcomes, and standards adopted by states to NCEO's list of outcomes and indicators included three distinct stages.

Stage 1: Obtaining State Documents

During the Spring of 1994, we mailed letters to all Commissioners of Education or State Superintendents requesting copies of their states' most recent student outcomes, standards, or goals document(s). In the Summer of 1994, we sent out a second letter to states from which we had not received responses. At this point, we asked nonrespondents to verify whether these documents (a) have not been published at the state level, or (b) are under development. A total of 48 states (including the District of Columbia) responded, either submitting documentation or verifying that the documentation is not available or is currently under development and not available for review. Thirty-six states submitted some type of documentation. Of the states submitting documentation, 30 included information related to goals, outcomes, standards, or indicators that could be compared to the NCEO conceptual model at grade 8.

Stage 2: Selecting Documents to Match at the Grade 4 Level

States have developed various documents related to state articulated education goals, outcomes, and standards. We selected the state documents that most specifically reflected learner goals, objectives or standards, and indictors, without delving into curriculum-level materials or state assessment test items.[1] When states submitted multiple types of documents, we considered them for inclusion in the mapping activity in the following priority order:

1. Statements of learner goals, objectives, outcomes, performance standards, benchmarks, and/or indicators that typically were related to state assessment systems;

2. Statements of curriculum standards or frameworks that include specific statements of learner goals, objectives, performance standards, benchmarks, or indicators;

3. Statements of state education goals;

4. Statements of educational program standards or opportunity-to-learn standards.

Only a few states target educational goals toward specific ages or grades of students. A number of states have a single set of goals that cover kindergarten through grade 12; others have clusters of age or grade related goals (e.g., K-3, 5-8, and 9-12). In many states, the grades or ages included in the cluster vary by subject or domain area.

As a result, two NCEO staff independently reviewed the documents submitted by each state to (1) select the type of document that would be used in the matching activity, and (2) specify the age or grade levels that would be matched to the grade 8 level of the NCEO model. Discrepancies between the reviewers were resolved by group consensus, and/or review by a third individual. The document used as part of the matching activity is listed and briefly described at the beginning of each state list of goals in Chart 4.

[1] Some of the terms used by States include goals, objectives, outcomes, standards, indicators, or benchmarks. We refer to them generally as state goals.

Stage 3: The Matching Process

NCEO's model is presented in three levels that become increasingly more specific: Domains, Outcomes, and Indicators. Matching was done at each of these levels in Charts 1-3. In addition, we present a listing of each state's goals that we used in the matching process in Chart 4. More specifically, the following sequence was used to complete the matching process.

State Articulated Goals: States' goals were first listed using their format as much as possible (see Chart 4). We then matched the NCEO domains, outcomes, and indicators to these state goals. Matches were first established at the domain level. If the state goal fit within the NCEO domain, a "deeper" match at the outcome and indicators levels was sought. The deepest possible match to the NCEO model is recorded in a space next to the state goal.

The Indicator Level: Using the information from Chart 4, we then reversed the process and matched the state goals to the NCEO model at all three levels: Indicator, Outcome, and Outcome Domain. If possible, matches were made first at the indicator level. If this was not possible, we then looked to match a state goal with an outcome, and then a domain. Chart 3, which shows the results of this process, contains an "X" at the deepest level of match. Thus, when an "X" appears at the domain or outcome level, the match is generally less precise than if it were at the indicator level.

The Outcome Level: If the state has *one or more* goals that fit under one of the NCEO outcomes (at the indicator or outcome levels), we put an "X" in the outcome box and also in the broader domain box (see Chart 2).

The Domain Level: If the state has *one or more* goals that fit under a specific NCEO domain (at any level), an "X" was put in the box for that domain (see Chart 1).

As is often the case in content analyses, the concepts included in state articulated goals do not provide a one-to-one correspondence with the concepts included in NCEO's domains, outcomes, or indicators. Thus, several decisions had to made by the reviewers. The following decisions provide an illustration of the reasoning used in the matching process.

The degree of specificity in the states' goals and the NCEO model are not always the same. Since the intent of our review was to examine the overall correspondence between state goals and the NCEO model, we sometimes match specific goals listed in the state document to an NCEO domain. A match with an NCEO domain, therefore, does not necessarily indicate the state has embraced all the NCEO outcomes and indicators within that domain.

The state goals sometimes contained more than one concept and seemed to fall under more than one NCEO domain, outcome, or indicator. In these instances, we matched the state goal to as many domains, outcomes, or indicators as seemed appropriate. Thus, the state goal *Students will participate in problem-solving activities so they can use concrete models to develop an understanding of concepts of addition, subtraction, multiplication, and division* matches to three NCEO outcomes or indicators: (A2a) Percent of time students participate actively in a variety of meaningful learning activities and routines in general education classrooms, (F2a) Percent of students who demonstrate problem-solving and critical thinking skills, and (F3a) Percent of students who demonstrate competence in math to function in home, school, and community environments.

NCEO's outcome indicators are written in the form of finding a percent of the number of students that meet a particular indicator. An example of an indicator is *Percent of students who meet individualized standards of physical fitness*. Most state goals are not written using this

language. Although the form of measurement for the state goal may not be the same, the two were matched if the same general concept were discussed in both.

General Findings

The following general findings emerged when state goals were matched to NCEO's model at the domain level:

- All 30 of the states that have articulated goals for students at grade 8 included statements that correspond to the NCEO outcome domain, Academic and Functional Literacy

- Between one-half to three-quarters of the states we examined specified goals that corresponded to the following NCEO domains:

  - Presence and Participation (23 out of 30 States)
  - Responsibility and Independence (21 out of 30)
  - Contribution and Citizenship (20 out of 30)
  - Personal and Social Adjustment (22 out of 30)

- Few states identified goals that were matched to two NCEO domains: Accommodation and Adaptation (four out of 30) and Satisfaction (two out of 30)

We also matched state goals to the NCEO model at the outcome level. This analysis takes us one step "deeper" (or more specific) into the NCEO model. We examined the general degree of match between the states' goals and the overall group of outcomes within each NCEO domain. The key question we asked is: To what extent do states identify student goals that correspond to the outcomes specified under each domain of the NCEO model? To answer this question, we determined the proportion of states that articulated goals that correspond to the outcomes specified under each domain of the NCEO model. General findings include:

- A high proportion of states (more than 75%) specified goals that correspond to most of the outcomes under the NCEO domain, Academic and Functional Literacy.

- All four of the outcomes under the domain Personal and Social Adjustment were matched to goals of at least one-half of the States we examined

- A moderate proportion of states (50-75%) articulated goals that generally corresponded to at least one outcome under the following domains:

  - Presence and Participation (outcome: Participates)
  - Physical Health (outcomes: Makes healthy lifestyle choices and Is aware of basic safety, fitness, and health care needs)
  - Responsibility and Independence (outcome: Is responsible for self)
  - Contribution and Citizenship (outcome: Complies with school and community rules)

- Given the poor correspondence at the domain level, it is not surprising that few states (less than 25%) have articulated goals that correspond to outcomes under the following two NCEO domains: Accommodation and Adaptation, and Satisfaction

The NCEO model includes a number of indicators for each outcome statement. We grouped states in terms of the degree of correspondence of goals with NCEO indicators. Strong

matches represent more than 75% of the states. Moderate matches represent 50-75% of the states, while weaker matches represent less than 50% of the States. General findings include:

- There was a strong match (greater than 75%) for most indicators under the domain, Academic and Functional Literacy
- The following indicators (followed by their domain and outcome in parenthesis) received a moderate number of matches (50-75%):
- Percent of students who are exploring career options within the community (Domain: Presence and Participation; Outcome: Participates)
- Percent of students who can prioritize and set goals and persevere toward them (Domain: Responsibility and Independence; Outcome: Is responsible for self)
- Percent of children who respect and show concern for others (Domain: Personal and Social Adjustment; Outcome: Respects cultural and individual differences)
- Percent of students who engage in productive group work (Domain: Personal and Social Adjustment; Outcome: Gets along with other people)
- The remaining NCEO indicators were only weakly matched to state goals. This overall lack of correspondence, however, may be due more to the level of specificity being used by States to articulate goals than a lack of conceptual congruence.

Reference

Vanderwood, M.L., & Ysseldyke, J.E. (1993). Consensus building: A process for selecting educational outcomes and indicators (Outcomes and Indicators Number 2). Minneapolis, MN: National Center on Educational Outcomes.

States Included in the Grade 8 Matching

AR	Arkansas
CA	California
CO	Colorado
DE	Delaware
DC	District of Columbia
FL	Florida
HI	Hawaii
ID	Idaho
IL	Illinois
IN	Indiana
KS	Kansas
KY	Kentucky
MD	Maryland
MI	Michigan
MT	Montana
NE	Nebraska
NH	New Hampshire
NM	New Mexico
NY	New York
NC	North Carolina
OH	Ohio
OK	Oklahoma
OR	Oregon
PA	Pennsylvania
SC	South Carolina
SD	South Dakota
UT	Utah
VA	Virginia
WA	Washington
WV	West Virginia

Chart 1. State Matching to NCEO Model Outcome Domains

	OUTCOME DOMAIN							
STATE	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
AR	X			X	X	X	X	
CA	X		X	X	X	X	X	
CO						X		
DE				X		X	X	
DC	X	X	X		X	X		
FL	X	X	X	X	X	X	X	X
HI	X	X	X	X	X	X	X	
ID	X			X		X	X	
IL						X		
IN	X	X		X	X	X	X	X
KS	X		X	X	X	X	X	
KY	X		X	X	X	X	X	
MD				X	X	X	X	
MI	X		X	X	X	X	X	
MT	X		X	X	X	X	X	
NE						X		
NH	X				X	X		
NM	X		X	X	X	X	X	
NY	X		X	X	X	X	X	
NC	X			X	X	X	X	
OH					X	X		
OK	X		X	X	X	X	X	
OR	X		X	X		X	X	
PA	X		X	X	X	X	X	
SC	X		X			X	X	
SD						X		
UT	X		X	X	X	X	X	
VA	X		X			X		
WA	X		X	X	X	X	X	
WV	X		X	X		X	X	

KEY:

A. Presence and Participation
B. Family Involvement/Accommodation and Adaptation
C. Physical Health
D. Responsibility and Independence
E. Contribution and Citizenship
F. Academic and Functional Literacy
G. Personal and Social Adjustment
H. Satisfaction

Chart 2. State Matching to NCEO Model Outcome Domains and Outcomes

NCEO DOMAINS AND OUTCOMES	< 25%	25 - 50%	51 -75%	> 75%
A. Presence and Participation				X
1. Is present in school	X			
2. Participates			X	
B. Accommodation and Adaptation	X			
1. Uses enrichments, adaptations, accommodations, or compensations necessary to achieve outcomes in each of the major domains	X			
2. Demonstrates the presence of family support and coping skills	X			
C. Physical Health			X	
1. Makes healthy lifestyle choices		X		
2. Is aware of basic safety, fitness, and health care needs		X		
3. Is physically fit		X		
D. Responsibility and Independence			X	
1. Demonstrates age-appropriate independence		X		
2. Gets about in the environment	X			
3. Is responsible for self			X	
E. Contribution and Citizenship			X	
1. Complies with school and community rules			X	
2. Knows the significance of voting	X			
3. Volunteers		X		
F. Academic and Functional Literacy				X
1. Demonstrates competence in communication				X
2. Demonstrates competence in problem solving strategies and critical thinking skills				X
3. Demonstrates competence in math, reading, and writing skills				X
4. Demonstrates competence in other academic and nonacademic areas				X
5. Demonstrates competence in using technology				X
G. Personal and Social Adjustment			X	
1. Copes effectively with personal challenges, frustrations, and stressors		X		
2. Has good self-image			X	
3. Respects cultural and individual differences			X	
4. Gets along with other people			X	
H. Satisfaction	X			
1. Student satisfaction with school experience	X			
2. Parent/guardian satisfaction with the education that student is receiving	X			
3. Community satisfaction with education that student is receiving	X			

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Chart 3. State Matching to NCEO Outcome Domains, Outcomes and Indicators

NCEO DOMAINS, OUTCOMES AND INDICATORS	AR	CA	CO	DE	DC	FL	HI	ID	IL	IN	KS	KY	MD	MI	MT	NE	NH	NM	NY	NC	OH	OK	OR	PA	SC	SD	UT	VA	WA	WV
A. Presence and Participation																						X								
1. Is present in school																	X											X		
a. Rate of absenteeism during school year (differentiated for reasons of suspension, medical/health, truancy, and other						X			X								X											X		
b. Percent of students excluded from their typical school placement					X																									
c. Percent of students attending specific settings (for example, separate schools, residential settings, and homebound						X																								
2. Participates						X	X	X		X				X	X								X							
a. Percent of time students participate actively in a variety of meaningful learning activities and routines in general education classrooms	X						X			X	X			X	X			X		X		X	X		X		X		X	X
b. Percent of time students participate actively in extracurricular activities during school year															X															
c. Percent of students who participate in district, state, and national testing programs (including alternative testing programs)																	X													
d. Percent of students who move between school settings during the year (mobility rate)																														
e. Percent of students who participate actively in community activities		X				X	X			X	X		X	X				X	X				X	X				X		
f. Percent of students who are exploring career options within the community	X						X			X		X		X	X			X	X	X		X		X	X			X	X	X
B. Accommodation and Adaptation																														
1. Uses enrichments, adaptations, accommodations, or compensations necessary to achieve outcomes in each of the major domains										X																				
a. Percent of students who demonstrate successful enrichments, adaptations, accommodations, or compensation skills required to move about in their environments										X																				
b. Percent of students who demonstrate successful enrichments, adaptations, accommodations, or compensation skills required to communicate																														
c. Percent of students who demonstrate successful enrichments, adaptations, accommodations, or compensation skills required to read (or receive information from materials usually printed) and/or perform other academic skills																														
d. Percent of students who demonstrate successful enrichments, adaptations, accommodations, or compensation skills required to participate in activities in home, school, and community environments										X																				

Chart 3, continued. State Matching to NCEO Outcome Domains, Outcomes and Indicators

NCEO DOMAINS, OUTCOMES AND INDICATORS	AR	CA	CO	DE	DC	FL	HI	ID	IL	IN	KS	KY	MD	MI	MT	NE	NH	NM	NY	NC	OH	OK	OR	PA	SC	SD	UT	VA	WA	WV
e. Percent of students who demonstrate successful enrichments, adaptations, accommodations, or compensation skills required to manage personal needs in home, school, and community environments										X																				
2. Demonstrates the presence of family support and coping skills																														
a. Percent of families using community resources and programs needed by students							X																							
b. Percent of families participating in the education of their children					X	X																								
c. Percent of families providing environments supportive of their children's education and learning																														
C. Physical Health							X															X	X			X			
1. Makes healthy lifestyle choices		X				X	X				X	X			X			X	X			X	X	X		X		X	X
a. Percent of students who make good nutritional choices											X				X			X				X		X		X			
b. Percent of students who elect to participate regularly in sports, recreational, and/or exercise activities					X		X					X			X			X				X	X	X		X			X
c. Percent of students who indicate that they use tobacco, alcohol, or drugs																														
2. Is aware of basic safety, fitness, and health care needs		X					X					X										X	X	X		X		X	
a. Percent of students who are aware of basic safety precautions and procedures														X	X			X				X	X	X	X	X			X
b. Percent of students who are aware of basic fitness needs							X					X						X				X	X						
c. Percent of students who are aware of basic health care needs		X													X			X				X	X	X					X
d. Percent of students who are aware of dangers of use and abuse of tobacco, alcohol, drugs, poisons, and medicines						X									X			X	X			X	X			X			X
3. Is physically fit												X			X			X				X	X	X		X			X
a. Percent of students who meet individualized standards of physical fitness					X										X			X					X	X		X	X		
D. Responsibility and Independence		X				X				X	X	X	X	X	X			X	X					X		X			
1. Demonstrates age-appropriate independence						X									X					X				X					
a. Percent of students who assume responsibility in a family, group, or individual situation		X				X	X				X	X		X	X			X	X				X	X		X		X	X
2. Gets about in the environment																														
a. Percent of students who can get to and from a variety of destinations																														
b. Percent of students who complete transactions in the community (for example, shopping, going to the library)																														
3. Is responsible for self	X					X	X			X		X		X					X											
a. Percent of students who can attend to their own hygiene needs						X													X											

Chart 3, continued. State Matching to NCEO Outcome Domains, Outcomes and Indicators

NCEO DOMAINS, OUTCOMES AND INDICATORS	AR	CA	CO	DE	DC	FL	HI	ID	IL	IN	KS	KY	MD	MI	MT	NE	NH	NM	NY	NC	OH	OK	OR	PA	SC	SD	UT	VA	WA	WV
b. Percent of students who can take care of their own belongings																														
c. Percent of students who access a support network that effectively advocates for the student														X									X						
d. Percent of students who effectively advocate for themselves										X													X						
e. Percent of students who can prioritize and set goals and persevere toward them	X			X		X	X	X			X	X		X	X			X	X			X	X					X	X
E. Contribution and Citizenship		X					X				X	X	X	X	X			X	X	X		X		X			X		
1. Complies with school and community rules						X									X			X	X			X							
a. Percent of students who are beginning to act as responsible citizens (for example, recycling, helping each other, caring about the environment, respecting property)		X				X	X				X	X		X	X			X	X					X			X		
b. Percent of students who have been expelled, repeatedly suspended, or subjected to disciplinary actions					X	X				X								X											
c. Percent of students involved in the legal system																														
2. Knows the significance of voting											X							X											
a. Percent of students who know the significance of voting														X				X											
3. Volunteers														X															
a. Percent of students who participate in school and classroom governance activities											X			X				X											
b. Percent of students who use their interests and abilities to benefit others and contribute to the group	X					X	X					X						X	X									X	
c. Percent of students who volunteer time to school, civic, community, or non-profit activities											X			X	X			X			X							X	
F. Academic and Functional Literacy		X						X		X		X			X		X	X	X				X					X	
1. Demonstrates competence in communication	X	X	X	X		X	X	X		X	X	X	X	X		X		X	X	X		X		X		X	X			
a. Percent of students who use and comprehend language that effectively accomplishes the purpose of the communication	X	X		X		X	X	X		X	X	X		X	X			X	X	X		X	X	X	X	X	X		X	X
2. Demonstrates competence in problem-solving strategies and critical thinking skills																														
a. Percent of students who demonstrate problem-solving and critical thinking skills	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X		X	X
3. Demonstrates competence in math, reading, and writing skills																		X	X							X				
a. Percent of students who demonstrate competence in math to function in home school, and community environments	X	X	X	X			X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X		X	X
b. Percent of students who demonstrate competence in reading to function in home school, and community environments	X	X	X	X			X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X			X		X	X
c. Percent of students who demonstrate competence in writing to function in home school, and community environments	X	X	X	X		X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X			X		X	X

Chart 3, continued. State Matching to NCEO Outcome Domains, Outcomes and Indicators

NCEO DOMAINS, OUTCOMES AND INDICATORS	AR	CA	CO	DE	DC	FL	HI	ID	IL	IN	KS	KY	MD	MI	MT	NE	NH	NM	NY	NC	OH	OK	OR	PA	SC	SD	UT	VA	WA	WV
d. Percent of students who excel in math, read-in, writing, and/or other academic skills					X	X				X							X						X							
e. Percent of students who demonstrate need for remediation					X												X													
4. Demonstrates competence in other academic and nonacademic areas	X	X		X		X	X	X		X	X	X	X	X	X			X	X	X		X	X	X			X			X
a. Percent of students who demonstrate competence in other academic domains (science, language, geography, social studies) to function in home, school, and community environments	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
b. Percent of demonstrate competence in cultural domains (fine and performing arts) to function in home, school, and community environments	X	X		X		X	X			X	X	X	X	X	X			X	X	X	X	X	X	X			X		X	X
5. Demonstrates competence in using technology																														
a. Percent of students who apply technology to enhance functioning in home, school, and community environments	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X		X	X
6. Personal and Social Adjustment		X				X	X			X		X		X				X	X				X				X			
1. Copes effectively with personal challenges, frustrations, and stressors								X			X	X		X				X	X			X					X			X
a. Percent of students who deal appropriately with frustration and unfavorable events							X	X							X															
b. Percent of students who express feelings and needs in socially acceptable ways						X				X	X			X	X								X							
c. Percent of students whose behavior reflects an appropriate degree of self-control												X																	X	
d. Percent of students whose behavior reflects a knowledge of and acceptance of the consequences of their behavior (for example, makes restitution)							X																							
2. Has good self-image							X					X		X					X											
a. Percent of students who perceive themselves as worthwhile				X		X	X	X		X			X	X	X			X	X								X			
b. Percent of students who perceive themselves as competent	X	X		X			X	X			X			X	X			X					X		X					X
c. Percent of children who demonstrate knowledge of and acknowledge their own limitations							X	X						X					X											
3. Respects cultural and individual differences	X	X									X	X		X				X					X	X						
a. Percent of students who respect and show concern for others		X		X		X		X		X	X	X	X	X	X			X	X			X	X	X			X		X	X
b. Percent of students who accept cultural, racial, ability, and family differences	X	X		X		X	X	X			X			X	X			X	X				X						X	
c. Percent of students who participate in making the community welcoming and inclusive of diversity														X																
4. Gets along with other people		X				X	X			X		X	X	X				X	X			X	X				X		X	X
a. Percent of students who have friends their own age and are part of a social network		X													X								X				X			

Chart 3, continued. State Matching to NCEO Outcome Domains, Outcomes and Indicators

NCEO DOMAINS, OUTCOMES AND INDICATORS	AR	CA	CO	DE	DC	FL	HI	ID	IL	IN	KS	KY	MD	MI	MT	NE	NH	NM	NY	NC	OH	OK	OR	PA	SC	SD	UT	VA	WA	WV
b. Percent of students who engage in productive group work	X	X		X		X	X	X		X	X	X	X	X	X			X	X	X		X	X	X	X		X		X	X
c. Percent of students who demonstrate skill in managing interpersonal conflict		X				X	X	X			X			X	X			X	X			X	X							
H. Satisfaction																														
1. Student satisfaction with school experience						X																								
a. Percent of students who are satisfied with their level of achievement (in all domains)										X																				
b. Percent of students who are satisfied with their educational experiences										X																				
c. Percent of students who are satisfied with their level of independence																														
2. Parent/guardian satisfaction with education student is receiving						X				X																				
a. Percent of parents/guardians who are satisfied with their children's level of achievement										X																				
b. Percent of parents/guardians who are satisfied with their children's educational experiences										X																				
c. Percent of parents/guardians who are satisfied with their children's level of independence																														
3. Community satisfaction with education that student is receiving						X				X																				
a. Percent of community (teachers, policymakers, employers, general public) satisfied with level of student achievement										X																				
b. Percent of community (teachers, policymakers, employers, general public) satisfied with what is being provided in school (curriculum, extracurricular, teaching, and supports)										X																				
c. Percent of community (teachers, policymakers, employers, general public) satisfied with students' educational experiences																														

Chart 4. NCEO Codes for Outcome Domains, Outcomes, and Indicators Matched to State Goals.

The following pages list the states' goals as they appear in their amendments. For each of them, we have indentified the corresponding NCEO codes.

Arkansas

Documents Utilized

Draft of the Arkansas Foreign Language Curriculum Framework (September, 1993)
The Arkansas English Language Arts and Mathematics Curriculum Frameworks (1993 edition)
Draft of the Arkansas Reading Curriculum Framework (September, 1993)
Arkansas Science Curriculum Framework (1994)

Background

In 1991, the Arkansas General Assembly passed Act 236, which calls for schools to make curriculum changes that emphasize teaching students to think. In accordance to Act 236, the Arkansas Department of Education has developed curriculum frameworks that specify specific learner outcomes which are developed within particular subject areas. Frameworks describe student learning for K-4, 5-8, and 9-12. These curriculum frameworks are the basis for state-level assessments of schools.

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	NCEO CODE
FOREIGN LANGUAGE	
Strand 1: LISTENING	
Content Standard: Students will listen to a variety of materials for comprehension, response, evaluation and enjoyment.	F1
1.1 Student Learning Expectations, Grades 5-8	
8. Distinguish variations in sounds and intonation patterns.	F1a
9. Use a variety of technological tools to enhance listening skills.	F1a
10. Comprehend basic structures, expressions and common vocabulary.	F1a
11. Recognize familiar material in unfamiliar contexts.	F1a
12. Understand narratives dialogues or announcements.	F1a
13. Comprehend native speech in controlled situations.	F1a
14. Recognize verbal clues in cultural situations.	F1a
15. Improve reading, oral and written performance through listening.	F1a
16. Analyze and evaluate what is heard.	F1a, F2a
Strand 2: SPEAKING	
Content Standard: Students will speak the language at appropriate levels of proficiency in a variety of situations.	F1a
2.1 Student Learning Expectations, Grades 5-8	
8. Ask and answer questions and make descriptive statements using complex grammatical structures.	F1a
9. Create with the language combining and recombining familiar material.	F1a
10. Initiate and sustain conversation in variety of situations.	F1a
11. Communicate effectively and appropriately in a range of common situations and for a variety of purposes.	F1a
Strand 3: READING	
Content Standard: Students will read a variety of materials for comprehension, response, evaluation and enjoyment.	F2a, F3b
3.1 Student Learning Expectations, Grades 5-8	
11. Expand vocabulary by using dictionaries and technological tools.	F4, F5a
12. Read familiar material orally with correct pronunciations and intonation.	F1a, F3b
13. Interpret written language in areas of practical need.	F3b
14. Derive meaning from material in context.	F3b

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	NCEO CODE
15. Understand main ideas and details.	F3b
16. Predict the outcomes of a story.	F2a, F3b
17. Engage in intensive and extensive reading, including literary selections.	F3b, F4b
Strand 4: WRITING	
Content Standards: Students will write effectively in different modes of discourse using process writing.	F3c
4.1 Student Learning Expectations, Grades 5-8	
7. Use a foreign language dictionary.	F4
8. Use computers and other available technology to write and revise texts.	F3c, F5a
9. Use familiar material in guided composition, including prewriting and postwriting activities	F3c
10. Write for an uninterrupted period of time.	F3c
11. Write cooperatively.	F3c, G4b
12. Express likes, dislikes and preferences.	F2a
13. Synthesize familiar material through the writing of narratives, dialogues and descriptions.	F2a, F3c
14. Create original compositions.	F3c, F4b
Content Standard 2: Students will develop written products that are structurally correct.	F3c
4.2 Student Learning Expectations, Grades 5-8	
5. Write from dictation	F3c
6. Write fixed expression and limited memorized material.	F3c
7. Write directed and original simple sentences.	F3c
8. Create original compositions demonstrating control of syntax in simple sentences.	F3c, F4b
9. Narrate and describe events in the present, past and future.	F3c
Strand 5: CULTURE	
Content Standard 1: Students will recognize, appreciate and respond to the special characteristics, contributions and traditions of the target culture.	G3b
5.1 Student Learning Expectations, Grades 5-8	
7. Understand that there are similarities and differences in attitudes toward common human experiences.	G3b
8. Become aware of cultural connotations of common words and phrases.	F4a
9. Experience, through simulation and technology, aspects of life in another country.	F4a
10. Compare and contrast customs of various countries.	F4a
Content Standard 2: Students will acquire a knowledge of and appreciation for the arts, history, geography and social structure of other countries.	F4a, F4b, G3
5.2 Student Learning Expectations, Grades 5-8	
5. Acquire knowledge of notable people, traditions, and historical events.	F4a
6. Recognize the contributions and importance of diverse cultural groups.	F4a
7. Appreciate the importance of folk arts and fine arts.	F4a
8. Understand the fundamental concepts of geography--location, place, human-environmental interaction, movement and region--of target countries.	F4a
9. Compare and contrast the economic, political, geographic and social systems of various countries.	F4a
READING CURRICULUM FRAMEWORK, 9-9-93	
Strand 1: READING KNOWLEDGE	
Content Standard: Students will use knowledge of the reading process as they construct meaning through the interaction of a variety of reader, text and contextual conditions.	F2a, F3b
1.1 Student Learning Expectations, Grades 5-8	
1. Know the goal of reading is constructing meaning.	F3b
2. Know there are relationships between written and oral language.	F3b

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3. Know the reader's prior knowledge influences the meaning the reader gains from the text.	F3b
4. Know that reading is communication between the author and the reader.	F3b
5. Know reading strategies are tools for constructing meaning, thinking critically, and solving problems.	F2a, F3b
6. Know features, structures and types of text influence reading.	F3b
7. Know the different environments, tasks and purposes influence reading.	F3b
8. Know critical thinking broadens and deepens the understanding of what is read.	F2a, F3b
9. Know the different cultures, eras and ideas influence reading.	F3b, F4c
10. Know the reader, text and context interact to influence reading.	F3b, F4a
Strand 2: READING BEHAVIOR	
Content Standard: Students will use appropriate strategies to monitor and direct their reading. They will construct, examine, extend and evaluate meaning from a variety of sources, for a variety of purposes and in a variety of contexts.	F3b
2.1 Student Learning Expectations, Grades 5-8	
21. Apply syntactic, semantic, and phonetic cues to decode and construct meaning from print with emphasis on content areas.	F3b
22. Employ background knowledge to aid in reading and writing, comprehension, problem solving strategies, and critical thinking.	F2a, F3b, F3c
23. Analyze features and organization of the text, e.g. bold type, glossary, etc.	F2a
24. Analyze text structure, e.g., story elements, patterns of organization, etc.	F2a, F3b
25. Clarify and assess the author's opinion, purpose, style, audience, form, and point of view, even when not explicitly stated.	F2a, F3b
26. Integrate textual information within sentences, the whole text, outside the text and from the readers' knowledge.	F3b
27. Apply literal and inferential comprehension, critical thinking and problem solving strategies to a variety of genres from diverse cultures and time periods.	F2a, F3b, F4b
28. Monitor own comprehension and self-correct when necessary.	F3b
29. Engage in cooperative learning, group learning and in-depth conversations to enhance comprehension.	F3b, G4b
30. Expand content-specific and personal vocabularies, e.g., reading , writing, listening, speaking.	F4, F4b
31. Compare purpose, task and situation in contexts.	F2a, F3b
32. Employ strategies flexibly according to reader, text and contextual factors, e.g. prediction, skimming etc.	F3b
33. Evaluate and react critically in oral and written language to what has been read.	F1a, F2a, F3b
34. Comprehend oral, visual and written instructions.	F1a, F3b
35. Demonstrate proficiency in oral reading, e.g., shred reading activities, etc.	F1a
36. Develop creative, playful and artistic use of oral and written language, e.g., puns, role-playing, etc.	F1a, F3c
37. Select appropriate resource material, independently, from a variety of sources, e.g., library media center, community, etc.	A2a, D3
38. Collect, organize and synthesize data from a wide variety of informational and technological resources, e.g. CD-ROM, interviews, etc.	F2a, F5c
Strand 3: READING DISPOSITIONS	
Content Standard: Students will demonstrate a willingness to use reading to continue to learn, to communicate and to solve problems.	F1a, F2a, F3b
3.1 Student Learning Expectations, Grades 5-8	
1. Value reading.	F3b
2. Develop a positive attitude toward reading and toward themselves as readers.	G2b
3. Enjoy reading and listening to a variety of texts.	F3b
4. Choose to read a variety of materials for a variety of purposes.	D3e, F3b
5. Self-select reading materials from libraries and other sources.	D3, D3e

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6. Experience a personal response to materials read.	F3b
7. Initiate and participate in conversations about reading.	F1a, F3b
8. Use reading to achieve goals outside the classroom.	F3b
9. Choose reading to satisfy, extend and expand personal interests.	F3b
10. Choose reading as an information-gathering tool to develop informed opinions and make decisions.	F3b
SCIENCE CURRICULUM FRAMEWORK	
Strand 1: SCIENTIFIC INQUIRY	
Content Standard: Students will demonstrate an understanding of science as a process of inquiry.	F4a
1.1 Student Learning Expectations, Grades 5-8	
7. Understand that the laws of science are universal.	F4a
8. Understand that a scientific thought is non-dogmatic.	F4a
9. Recognize that science deals only with inquiry about the natural world.	F4a
10. Understand that a scientific theory is based on testable evidence that is open to falsification and can be used to predict future events.	F4a
11. Identify problems and generate experimental data utilizing appropriate technology.	F4a
12. Pursue innovative ides to analyze and evaluate problems and explanations.	F4a, F5a
13. Think critically and logically about the relationship between evidence and explanations.	F2a, F4a
14. Generate conclusions based on evidence.	F2a, F4a
15. Design and conduct appropriate experiments to solve problems.	F2a, F4a
16. Read and communicate scientific information.	F1, F3b, F4a
17. Explore cultural and gender bias as an impediment to scientific research.	F3b, G3b
18. Relate scientific discoveries to their contributor, their impact on society and to appropriate cultural aspects.	F4a
19. Recognize that scientific thought is a continuum influenced by historical events.	F4a
Strand 2: CONNECTIONS AND APPLICATIONS	
Content Standard: Students will demonstrate an understanding of the connections and applications of science.	F4a
2.1 Student Learning Expectations, Grades 5-8	
6. Demonstrate how science is connected to all disciplines.	F4a
7. Apply appropriate knowledge and process skills from all curricular areas to form a solution to a given problem.	F2a, F4a
8. Understand the similarities and differences between scientific inquiry and technological design.	F4a
9. Apply various thinking/problem solving strategies to scientific issues.	F2a, F4a
10. Utilize appropriate technology to investigate models, analyze data and present simulations.	F4a, F5a
11. Investigate a variety of science specific and related careers within the community and beyond.	A2f, F4a
Strand 3: PHYSICAL SYSTEMS	
Content Standard: Students will explore, demonstrate, communicate, apply, and evaluate the knowledge of physical systems.	F1, F2a, F4a
3.1 Student Learning Expectations, Grades 5-8	
15. Demonstrate an understanding of the states of matter.	F4a
16. Identify and describe the properties of an atom.	F4a
17. Recognize and describe combinations of matter.	F4a
18. Explore the Periodic Chart.	F4a
19. Experiment with physical and chemical changes.	F4a
20. Explore the sources and preservation of energy and energy resources.	F4a
21. Construct models and demonstrate the function of machines.	F4a
22. Investigate the laws of motion.	F4a

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	NCEO CODE
23. Experiment with and measure forces.	F4a
24. Demonstrate and communicate the relationship between magnetic fields and electric currents.	F4a
25. Investigate the properties of energy transfer by light.	F4a
26. Investigate variations of sound.	F4a
27. Choose appropriate measurement devices for a given activity.	F4a
Strand 4: LIFE SCIENCE SYSTEMS	
Content Standard: Students will explore, demonstrate, communicate, apply and evaluate the knowledge of life systems.	F1, F2a, F4a
4.1 Student Learning Expectations, Grades 5-8	
10. Describe similarities/differences between single celled and multi-celled organisms.	F4a
11. Explain how cells use food as a source of energy.	F4a
12. Compare and classify organisms into major groups on the basis of their structure.	F4a
13. Describe the life cycles of various organisms.	F4a
14. Explain how systems and processes work together in humans and other organisms.	F4a
15. Describe how heredity and environment influence/determine characteristics of an organism.	F4a
16. Explain how physical and/or behavioral characteristics of organisms help them to survive in their environments.	F4a
17. Describe how biologists might trace possible evolutionary relationships among present and past life forms.	F4a
18. Analyze ecosystems in terms of population relationships, food webs, energy flow and biotic succession.	F4a
19. Trace the pathway of materials as they cycle through the environment.	F4a
20. Evaluate human impact on the environment.	F4a
Strand 5: EARTH/SPACE SYSTEMS	
Content Standard: Students will explore, demonstrate, communicate, apply and evaluate knowledge of the properties of earth and space systems.	F1, F2a, F4a
5.1 Student Learning Expectations, Grades 5-8	
11. Investigate the formation of rocks, minerals and fossils and their use in determining the age and geological history of the earth.	F4a
12. Explain the natural changes in the earth's surface over time.	F4a
13. Explore the concept of plate tectonics and describe surface features of the earth using maps.	F4a
14. Describe and model the natural physiographic divisions of Arkansas.	F4a
15. Describe and measure (when appropriate) the composition, characteristics and changing weather patterns of the atmosphere.	F4a
16. Investigate the impact that water in all of its forms has on the earth's surface.	F4a
17. Trace the pathways of how rain water in Arkansas reaches the Gulf of Mexico.	F4a
18. Describe and explain the reasons for seasonal changes.	F4a
19. Analyze how the features of the oceans (estuaries, benthos, minerals, absorption of CO_2, food, mid-oceans ridges, etc.) affects humans.	F2a, F4a
20. Compare the earth's composition to other planets in terms of supporting life.	F4a
21. Explain and compare the motions of planets, moons and comets in the solar system.	F4a
22. Investigate the theories of the formation of the solar system.	F4a
23. Explore the potential of space exploration and its relationship to the study of the universe.	F4a
24. Analyze the impact of human activities on the earth's crust, hydrosphere, atmosphere and biosphere (i.e., climate change, greenhouse warming, ozone depletion and UV radiation) and explore methods of conservation and recycling of the earth's resources.	F2a, F4a
ENGLISH, LANGUAGE ARTS AND MATHEMATICS CURRICULUM FRAMEWORKS	
ENGLISH FRAMEWORKS	
Strand 1: WRITING	

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Content Standard 1: Students will use writing as a means of exploring thought and as a process involving prewriting activities, drafting, receiving, feedback, revising, editing and postwriting activities, including evaluating, publishing and displaying.	F3c
1.1 Student Learning Expectations, Grades 5-8	
16. Write in class for uninterrupted periods of time about experiences, thoughts, feelings and attitudes of self and others.	F3c
17. Analyze thinking through the writing of explanations and directions, outline, mapping, etc.	F2a, F3c
18. Apply a variety of prewriting activities including clustering, brainstorming, dialogue, drawing, role playing, learning logs, etc.	F3c
19. Develop a first draft that focuses on a central idea.	F3c
20. Revise writing based on a student-teacher collaborative feedback in order to re-examine for purpose, audience, voice, sentence effectiveness, etc.	F3c
21. Use a thesaurus.	F3c
22. Share final product with others through publication, display, reading aloud, etc.	F3c
Content Standard 2: Students with appropriate instruction will write in different modes of discourse for a variety of audiences and purposes.	F3c
1.2 Student Learning Expectations, Grades 5-8	
4. Discover language through "fun" writing activities.	F3c
5. Write in a variety of forms such as personal narrative, dialogue, persuasive essays, messages and letters, poetry, advertisements, etc.	F3c
6. Evaluate diction, style and vocabulary in relation to purpose and audience.	F3c
7. Write to reflect personal, multicultural and universal ideas.	F3c
8. Write to synthesize information from multiple sources.	F3c
Content Standard 3: Students will develop final written products which conform to conventional standards.	F3c
1.3 Student Learning Expectations, Grades 5-8	
4. Maintain and evaluate a collection of writing samples.	F3c
5. Edit written work for developmentally appropriate spelling, usage and mechanics.	F3c
Strand 2: READING	
Content Standard 1: All students will read to comprehend, respond to, evaluate and appreciate works of literature and other kind of writing which reflect their own cultures and viewpoints as well as those of others.	F2a, F3b, G3b
2.1 Student Learning Expectations, Grades 5-8	
18. Read individually and in groups.	F3b
19. Establish purpose for reading.	F3b
20. Analyze related and implied main ideas and supportive details.	F2a, F3b
21. Analyze literature using patterns of organization such as cause and effect, comparison and contrast, etc.	F2a, F3b, F4b
22. Distinguish personal opinions and points of view that influence what is said, heard, or read.	F2a
23. Analyze literature for the purpose, ides and style of the author.	F2a, F4b
24. Understand developmentally appropriate literary concepts such as symbolism, allusion, figurative language, etc.	F4b
25. Expand personal vocabulary.	F4
26. Use library and reference skills.	F4
Content Standard 2: Students will read independently for a wide range of goals and purposes.	F3b
2.2 Student Learning Expectations, Grades 5-8	
5. Read a variety of materials to meet students personal needs and interests.	F3b
6. Read to discern validity of written material such a propaganda and bias.	F3b

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	NCEO CODE
7. Read and follow directions.	F3b
8. Read to research an ideas using various technical resources.	F3b, F5a
Strand 3: SPEAKING	
Content Standard 1: Students will develop communication skills through a variety of formal and informal speaking opportunities which are integrated into the language arts curriculum.	F1a, F4b
3.1 Student Learning Expectations, Grades 5-8	
16. Give and follow directions.	F1, F1a
17. Contribute to discussions.	E3b, F1a
18. Summarize and paraphrase what others have said.	F1a
19. Read orally with meaning and expression.	F1a
20. Speak before a group to express or defend an opinion, present information, tell a story, present an oral interpretation.	F1a
21. Conduct an interview.	F1a
Content Standard 2: Students will develop organizational strategies and oral usage appropriate to a variety of situations.	F1a
3.2 Student Learning Expectations, Grades 5-8	
7. Use clear, concise language which is organized according to purpose, audience and situation.	F1a
8. Exhibit confidence as a speaker through effective use of language, body and voice.	F1a, G2b
Strand 4: LISTENING	
Content Standard: Students will learn in meaningful contexts the listening skills they need to succeed academically, socially, and professionally.	F1a
4.1 Student Learning Expectations, Grades 5-8	
10. Develop listening skills for the classroom.	F1a
11. Develop listening skills for varied social situations.	F1a
12. Develop listening skills appropriate to the work place.	F1a
13. Analyze and evaluate what is heard.	F1a, F2a
THE MATHEMATICS CURRICULUM FRAMEWORK	
Strand 1: NUMBER SENSE, PROPERTIES AND OPERATIONS	
Content Standard 1: The student will understand properties of numbers and operations.	F3a
1.1 Student Learning Expectations, Grades 5-8	
7. Generalize from numerical patterns and verify results.	F3a
8. Enhance number sense through mental computation, calculators and communication.	F3a, F5a
9. Represent numbers and operations in a variety of equivalent forms using models, diagrams and symbols.	F3a
10. Develop competency with rational number computation with and without technology.	F3a, F5a
11. Use elementary number theory.	F3a
Content Standard 2: The students will demonstrate an understanding of numbers and numerical relationships and the application to real-world situations.	F3a
1.2 Student Learning Expectations, Grades 5-8	
5. Use estimation and computation in application problems.	F3a
6. Apply ratios and proportional thinking in a variety of situations.	F3a
7. Understand that the problem situation determines the notational representation of the number.	F3a
8. Study the relationship of numbers in one and two dimensional graphs.	F3a
9. Demonstrate an understanding of the hierarchy of the real number system.	F3a
10. Use technology and manipulatives in problem solving.	F3a, F5a

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Strand 2: GEOMETRY	
Content Standard 1: Students will explore, demonstrate, communicate and apply knowledge of the properties of geometric shapes.	F1, F3a
2.1 Student Learning Expectations, Grades 5-8	
3. Identify, describe, compare and classify geometric figures in one, two and three dimensions.	F3a
4. Apply geometric properties.	F3a
Content Standard 2: Students will demonstrate an understanding of geometric relationships allowing them to use geometry to connect mathematics to their world.	F3a
2.2 Student Learning Expectations, Grades 5-8	
6. Explore and make predictions regarding transformation of geometric figures.	F2a, F3a
7. Establish and apply geometric relationships through informal reasoning.	F2a, F3a
8. Explore geometric concepts using manipulatives and technology.	F3a, F5a
9. Visualize and represent geometric figures with special attention to developing spatial sense.	F3a
Content Standard 3: Students will be able to solve problems that involve geometry and its application to other topics in mathematics or to other fields.	F2a, F3a
2.3 Student Learning Expectations, Grades 5-8	
5. Represent and solve problems using geometric models.	F2a, F3a
6. Develop an appreciation of geometry as a means of describing the physical world.	F3a
Strand 3: MEASUREMENT	
Content Standard 1: The student will use measurement attributes (length, capacity, weight, mass, area, volume, time, money, temperature, scale and angle) to describe and compare mathematical and real-world objects.	F3a
3.1 Student Learning Expectations, Grades 5-8	
5. Develop estimation strategies.	F3a
6. Estimate, calculate and compare the one, two and three dimensional features of objects in metric, customary and non-standard units of measure.	F3a
7. Convert from one measurement to another within the same system (customary or metric).	F3a
Content Standard 2: The student will demonstrate the appropriate use of measuring instruments.	F3a
3.2 Student Learning Expectations, Grades 5-8	
2. Use non-standard tools of measurement.	F3a
3. Select appropriate units and tools to measure to a required degree of accuracy.	F3a
4. Extend an understanding of the process of measurement.	F3a
5. Demonstrate an understanding of the structure and use of a variety of measurement systems.	F3a
Content Standard 3: The student will apply measurement concepts to solve problems.	F2a, F3a
3.3 Student Learning Expectations, Grades 5-8	
4. Develop formulas and procedures for determining measures to solve problems.	F3a
5. Develop the concepts of rate and other derived and indirect measurements to solve problems.	F3a
6. Solve problems by active involvement in measurement experiences.	F3a
7. Use manipulatives and technology.	F3a, F5a
8. Construct and use scale drawings.	F3a
Strand 4: DATA ANALYSIS, STATISTICS AND PROBABILITY	
Content Standard 1: The student will be actively involved in each of the steps that comprise data analysis, from gathering information to communicating results.	F1, F3a
4.1 Student Learning Expectations, Grades 5-8	
5. Systematically collect, organize and describe data.	F3a
6. Construct, read and interpret tables, charts and graphs.	F3a
7. Make predictions and convincing arguments that are based on data analysis.	F3a

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Content Standard 2: The students will explore probability models through experiments and simulations.	F3a
4.2 Student Learning Expectations, Grades 5-8	
3. Model situations by constructing sample spaces.	F3a
4. Make predictions based on experimental or theoretical probabilities.	F3a
5. Use a probability model for comparing experimental results with mathematical expectations.	F3a
6. Use manipulatives and technology.	F3a, F5a
Content Standard 3: The student will use probability and statistical concepts in problem solving and decision making situations.	F2a, F3a
4.3 Student Learning Expectations, Grades 5-8	
4. Evaluate arguments that are based on statistical data.	F2a, F3a
5. Make inferences and convincing arguments based on statistics.	F2a, F3a
6. Appreciate the power that probability and statistical methods have in decision making.	F3a
7. Use technology.	F5a
Strand 5: ALGEBRA FUNCTIONS	
Content Standard 1: The student will use the language of algebra as representational tool.	F3a
5.1 Student Learning Expectations, Grades 5-8	
8. Visualize algebra as the bridge between arithmetic and higher level mathematics.	F3a
9. Use manipulatives and technology to develop the concepts of variables, expressions and equations.	F3a, F5a
10. Represent, explore and analyze situations and number patterns with tables, graphs and equations.	F3a
11. Summarize the algebraic relationships discovered through explorations.	F3a
Content Standard 2: The student will use algebraic concepts to model, solve and test solutions to mathematical and real-world problems.	F2a, F3a
5.2 Student Learning Expectations, Grades 5-8	
4. Conduct informal investigations for analyzing, representing and generalizing functional relationships.	F2a, F3a
5. Use algebraic notations and thinking to formalize real-world problems.	F3a
6. Explore and solve equations and inequalities informally and formally using manipulatives and technology.	F3a, F5a
7. Communicate in written and verbal form a verification of the solution.	F1a, F3a, F3c

California

Documents Utilized

Foreign Language Framework for California Public Schools Kindergarten through Grade Twelve (1989)
Mathematics Framework for California Public Schools Kindergarten through Grade Twelve (1992)
Health Framework for California Public Schools Kindergarten through Grade Twelve (1994)
English - Language Arts Framework for California Public Schools Kindergarten through Grade Twelve (1987)
History - Social Science Framework for California Public Schools Kindergarten through Grade Twelve (1987)
Physical Education Framework for California Public Schools Kindergarten through Grade Twelve (1994)
Science Framework for California Public Schools Kindergarten through Grade Twelve (1990)

Note: California also has a Visual and Performing Arts Framework; however, we had not received as copy at the date of publication and were unable to match to this subject area.

Background

Reform efforts during the late 1980s and early 1990s in California have focused on upgrading the curriculum and strengthening graduation requirements. The curriculum frameworks, published by the California State Board of Education, were developed in a separate process for each subject area and are in the process of being updated. All of the frameworks describe student learning at specific grade-levels, typically K-4, 5-8, and 9-12. The frameworks are voluntary; but they are tied to the statewide assessment system, textbook adoption, and professional development. They were developed by leading educators throughout the state and are to be used by local schools as guidelines.

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HEALTH, GRADES 6-9	
Unifying Idea: Acceptance of personal responsibility for lifelong health.	
Expectations:	
Students will demonstrate ways in which they can enhance and maintain their own health and well-being.	C1
Students will demonstrate behaviors that prevent disease and speed recovery from illness.	C2c
Students will practice behaviors that reduce the risk of becoming involved in potentially dangerous situations and react to those situations in ways that help to protect their health.	C2
Unifying Idea: Respect for and promotion of the health of others.	
Expectations:	
Students will play a positive, active role in promoting the health of their families.	C1, D1a
Students will promote positive health practices within the school and the community, including developing positive relationships with their peers.	C1, G4a
Unifying Idea: An understanding of the process of growth and development.	
Expectations:	
Students will understand the variety of physical, mental, emotional, and social changes that occur throughout life.	F4

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Students will understand and accept individual differences in growth and development.	F4, G3b
Students will understand their developing sexuality, will choose to abstain from sexual activity, and will treat the sexuality of others with respect.	C1, G3b
MATHEMATICS	
NCTM STANDARDS FOR GRADES 5-8	
Standard 1: Mathematics as Problem Solving	
In grades five through eight, the mathematics curriculum should include numerous and varied experiences with problem solving as a method of inquiry and application so that students can:	
Use problem-solving approaches to investigate and understand mathematical content.	F2a, F3a
Formulate problems from situations within and outside mathematics.	F2a, F3a
Develop and apply a variety of strategies to solve problems, with emphasis on multistep and nonroutine problems.	F2a, F3a
Verify and interpret results with respect to the original problem situation.	F3a
Generalize solutions and strategies to new problem situations.	F3a
Acquire confidence in using mathematics meaningfully.	F3a, G2b
Standard 2: Mathematics as Communication	
In grades five through eight, the mathematics curriculum should include opportunities to communicate so that students can:	
Model situations, using oral, written, concrete, pictorial, graphical, and algebraic methods.	F1a, F3a
Reflect on and clarify their own thinking about mathematical ideas and situations.	F2a, F3a
Develop common understandings of mathematical ideas, including the role of definitions.	F3a
Use the skills of reading, listening, and viewing to interpret and evaluate mathematical ideas.	F1, F3a, F3b
Discuss mathematical ideas and make conjectures and convincing arguments.	F2a, F3a
Appreciate the value of mathematical notation and its role in the development of mathematical ideas.	F3a
Standard 3: Mathematics and Reasoning	
In grades five through eight, reasoning should permeate the mathematics curriculum so that students can:	
Recognize and apply deductive and inductive reasoning.	F2a
Understand and apply reasoning processes, with special attention being given to spatial reasoning and reasoning with proportions and graphs.	F2a, F3a
Make and evaluate mathematical conjectures and arguments.	F2a, F3a
Validate their own thinking.	F2a
Appreciate the pervasive use and power reasoning as a part of mathematics.	F2a, F3a
Standard 4: Mathematical Connections	
In grades five through eight, the mathematics curriculum should include the investigation of mathematical connections so that students can:	
See mathematics as an integrated whole.	F3a
Explore problems and describe results, using graphical, numerical, physical, algebraic, and verbal mathematical models or representations.	F3a
Use a mathematical idea to further their understanding of other mathematical ideas.	F3a
Apply mathematical thinking and modeling to solve problems that arise in other disciplines such as art, music, psychology, science, and business.	F3a
Value the role of mathematics in our culture and society.	F3a
Standard 5: Number and Number Relationships	
In grades five through eight, the mathematics curriculum should include the continued development of number and number relationships so that students can:	
Understand, represent, and use numbers in a variety of equivalent forms (integer, fraction, decimal, percent, exponential, and scientific notation) in real-world and mathematical	F3a

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problem situations.	
Develop number sense for whole numbers, fractions, decimals, integers, and rational numbers.	F3a
Understand and apply ratios, properties, and percents in a wide variety of situations.	F3a
Investigate relationships among fractions, decimals, and percents.	F3a
Represent numerical relationships in one-dimensional and two-dimensional graphs.	F3a
Standard 6: Number Systems and Number Theory	
In grades five through eight, the mathematics curriculum should include the study of number systems and number theory so that students can:	
Understand and appreciate the need for numbers beyond the whole numbers.	F3a
Develop and use order relations for whole numbers beyond the whole numbers.	F3a
Extend their understanding of whole number operations to fractions, decimals, integers, and rational numbers.	F3a
Understand how the basic arithmetic operations are related to one another.	F3a
Develop and apply number theory concepts (e.g., primes, factors, and multiples) in real-world and mathematical problem situations.	F3a
Standard 7: Computation and Estimation	
In grades five through eight, the mathematics curriculum should develop the concepts underlying computation and estimation in various contexts so that students can:	
Compute with whole numbers, fractions, decimals, integers, and rational numbers.	F3a
Develop, analyze, and explain procedures for computation and techniques for estimation.	F3a
Develop, analyze, and explain methods for solving proportions.	F3a
Select and use an appropriate method for computing from among mental arithmetic, paper-and-pencil, calculator, and computer methods.	F3a
Use computation, estimation, and proportions to solve problems.	F3a
Use estimation to check the reasonableness of results.	F3a
Standard 8: Patterns and Functions	
In grades five through eight, the mathematics curriculum should include explorations of patterns and functions so that students can:	
Describe, extend, analyze, and create a wide variety of patterns.	F3a
Describe and represent relationships with tables, graphs, and rules.	F3a
Analyze functional relationships to explain how a chance in one quantity results in change in another.	F2a
Use patterns and functions to represent and solve problems.	F2a, F3a
Standard 9: Algebra	
In grades five through eight, the mathematics curriculum should explorations of algebraic concepts and processes so that students can:	
Understand the concepts of variable, expression, and equation.	F3a
Represent situations and number patterns with tables, graphs, verbal rules, and equations and explore the interrelationships of these representations.	F3a
Analyze tables and graphs to identify properties and relationships.	F3a
Develop confidence in solving linear equations, using concrete, informal, and formal methods.	F3a, G2b
Investigate inequalities and nonlinear equations informally.	F3a
Apply algebraic methods to solve a variety of real-world and mathematical problems.	F2a, F3a
Standard 10: Statistics	
In grades five through eight, the mathematics curriculum should include exploration of statistics in real-world situations so that students can:	
Systematically collect, organize, and describe data.	F3a
Construct, read, and interpret tables, charts, and graphs.	F3a
Make inferences and convincing arguments based on data analysis.	F2a, F3a
Evaluate arguments based on data analysis.	F2a, F3a
Develop an appreciate for statistical methods as powerful means for decision making.	F2a, F3a
Standard 11: Probability	
In grades five through eight, the mathematics curriculum should include explorations of	

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probability in real-world situations so that students can:	
Model situations by devising and carrying out experiments or simulations to determine probabilities.	F3a
Model situations by constructing a sample space to determine probabilities.	F3a
Appreciate the power of using a probability model by comparing experimental results with mathematical expectations.	F3a
Make predictions based on experimental or theoretical probabilities.	F2a, F3a
Develop an appreciation for the pervasive use of probability in the real world.	F3a
Standard 12: Geometry	
In grades five through eight, the mathematics curriculum should include the study of the geometry of one, two, and three dimensions in a variety of situations so that students can:	
Identify, describe, compare, and classify geometric figures.	F3a
Visualize and represent geometric figures with special attention to developing spatial sense.	F3a
Explore transformations of geometric figures.	F3a
Represent and solve problems using geometric models.	F3a
Understand and apply geometric properties and relationships.	F3a
Develop an appreciation of geometry as a means of describing the physical world.	F3a
Standard 13: Measurement	
In grades five through eight, the mathematics curriculum should include extensive concrete experiences using measurements so that students can:	
Extend their understanding of the process of measurement.	F3a
Estimate, make, and use measurements to describe and compare phenomena.	F3a
Select appropriate units and tools to measure to the degree of accuracy required in a particular situation.	F3a
Understand the structure and use of systems of measurement.	F3a
Extend their understanding of the concepts of perimeter, area, volume, angle measure, capacity, and weight and mass.	F3a
Develop the concepts of rates and other derived and indirect measurements.	F3a
Develop formulas and procedures for determining measures to solve problems.	F2a, F3a
FOREIGN LANGUAGE	
INSTRUCTION IN ENGLISH AS A SECOND LANGUAGE	
Goals of Instructional Programs	
Students who successfully complete instruction in English as a second language should be able to:	
Function well enough in English to be successful in programs designed for native speakers of English.	F4a
Function successfully in the general school curriculum as appropriate for age, ability, and experience.	F4a
Demonstrate continuous progress without special instruction in English.	F4a
Demonstrate improved self-confidence and self-esteem in both an English-speaking environment and in their native-language environment.	F4a
COMPETENCY LEVELS	
Listening	F4a
Novice: Understands learned material at an elementary level.	
Intermediate: Understands routine speech and conversations.	
Advanced: Understands main ideas and details of many kinds of presentations.	
Superior: Understands all standard speech, including idioms and subtleties.	
Distinguished: Understands all forms and styles of speech.	

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Reading Novice: Recognizes alphabet and understands learned and written material. Intermediate: Understands main ideas, facts, and narratives in textbooks dealing with everyday matters. Advanced: Understands simple stories, news, letters, and technical textbooks of a general nature. Superior: Reads prose, literature, and so forth on a great variety of topics at a normal speed. Distinguished: Reads any written material and understands content, intent, cultural references, and so forth.	F4a
Conversation Novice: Communicates learned material at an elementary level. Intermediate: Participates in basic communication tasks; combines and recombines basic speech elements. Advanced: Maintains extended conversations; satisfies work and school needs; handles unforeseen problems. Superior: Communicates in most formal and informal situations, including abstract matters; can hypothesize and so forth. Distinguished: Communicates on a professional level; can tailor speech to audience, can negotiate, persuade, interpret, and so forth.	F4a
Writing Novice: Can copy, transcribe, and write learned material. Intermediate: Writes short messages and simple letters; takes notes, writes simple summaries. Advanced: Writes narratives, descriptions, business correspondence, résumés, and summaries. Superior: Expresses self in formal and informal writing; does research papers; writes on professional topics. Distinguished: Writes with precision; can represent a point of view; tailors writing to audience.	F4a
Culture Novice: Aware of stereotypes; handles cultural dimensions of everyday activities. Intermediate: Perceives cultural differences and recognizes points of misunderstanding; handles aspects of more complex situations. Advanced: Demonstrates important cultural behaviors; knows how misunderstandings arise; handles personal relationships and historical references. Superior: Handles most native customs, values, and attitudes in most social and professional situations. Distinguished: Near-native proficiency in sensitivity to values, beliefs, geographical differences, and historical conditioning.	F4a
Content/Vocabulary Novice: Understands 800 to 1,600 words; uses 300 to 600 words; frequently encounters basic everyday topics. Intermediate: Understands 1,000 to 3,000 words; uses 600 to 1,000 words; frequently encounters general topics. Advanced: Understands 2,400 to 4,500 words; uses 1,200 to 2,000 words; expands topics to business, politics, and social arrangements. Superior: Understands 3,500 to 6,000 words; uses 2,000 to 3,000 words; expands topics to more abstract areas of feeling, emotions, personality, and so forth. Distinguished: Near-native ability in topics and vocabulary handled.	F4a
Accuracy Accuracy constitutes the degree of control students have over such aspects as grammar, word choice, cultural appropriateness, graphics, comprehension, and so forth. Accuracy becomes	F4a

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most crucial at any level when errors result in miscommunication. Specific accuracy concerns for each stage of competency development can be found in other publications.	
Competency	F4a
Competency is the degree of skill in using all components as integrated acts of communication.	
SCIENCE	
PHYSICAL SCIENCES	
Section A: Matter	
1. What is matter, and what are its properties?	F4a
2. What are the basic units of matter, and where did matter come from?	F4a
3. What principles govern the interactions of matter? How does chemical structure determine the physical properties of matter?	F4a
Section B: Reactions and Interactions	
1. What happens when substances change?	F4a
2. What controls how substances change?	F4a
Section C: Force and Motion	
1. What is motion? What are some basic kinds of motion? How is motion described?	F4a
2. What is force? What are the characteristics of forces? What is the relationship of force to motion?	F4a
3. What are machines, and what do they do? What principles govern their action?	F4a
Section D: Energy: Sources and Transformations	
1. What is energy? What are its characteristics?	F4a
2. What do we do with energy? What changes occur as we use it?	F4a
Section E: Energy: Heat	
1. What is heat energy? Where does it come from, and what are its properties?	F4a
2. How do we use heat energy?	F4a
Section F: Energy: Electricity and Magnetism	
1. What are electricity and magnetism? What are they like, and what are their basic properties? How do they interact?	F4a
2. How do we use electricity and magnetism?	F4a
Section G: Energy: Light	
1. How does light enable us to see? What are the sources of light? What is light?	F4a
2. What are the properties of light?	F4a
3. How do we use light?	F4a
Section H: Energy: Sound	
1. Where does sound come from? What are its sources? How can sound be described?	F4a
2. How does sound enable us to hear? How do we produce sounds?	F4a
3. How do we use sound?	F4a
EARTH SCIENCES	
Section A: Astronomy	
1. What kinds of objects does the universe contain, and how do these objects relate to one another?	F4a
2. How has the universe evolved?	F4a
3. How do we learn about the contents and structure of the universe?	F4a
Section B: Geology and Natural Resources	
1. How has plate tectonics shaped the evolution of the earth?	F4a
2. How are rocks and minerals formed, how are they distinguished, and how are they classified?	F4a
3. What is the history of the earth, and how have geomorphic processes shaped the earth's present features?	F4a
4. What are the responsibilities of humans toward natural resources?	F4a

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Section C: Oceanography	
1. What is the water cycle? How does water the cycle affect the climate, weather, and life of the earth? How does water affect surface features of the land and the ocean floor?	F4a
2. What are the oceans? What are the environments and topography of the ocean bottoms? How do the oceans support life, and how have the oceans and their marine life changed through time?	F4a
3. How do waters circulate in the ocean, and how does this circulation affect weather and climate?	F4a
4. How do humans interact with the oceans? What may be some long-term effects of human interactions with the oceanic environments?	F4a
LIFE SCIENCES	
Section A: Living Things	
1. What are the characteristics of living things?	F4a
2. How do the structures of living things perform their functions, interact with each other, and contribute to the maintenance and growth of the organism?	F4a
3. What are the relationships of living organisms, and how are living things classified?	F4a
4. How do humans interact with other living things?	F4a
Section B: Cells, Genetics, and Evolution	
[Note: In this section, the term *cells* includes the general areas of cellular and molecular biology, as well as biochemical topics covered in high school biology. Cells also includes general histological and structural features of tissue and organ systems, as well as cellular parts and components in one-celled and multi-celled organisms. *Genetics* includes genetic structure and developmental processes. *Evolution* includes population genetics, evolutionary biology, and paleontology.]	
1. What are cells? What are their component structures and their functions? How do they grow? What is the biochemical basis of life and of metabolism?	F4a
2. How are the characteristics of living things passed on through generations? How does heredity determine the development of individual organisms?	F4a
3. How has life changed and diversified through time? What processes and patterns characterize the evolution of life?	F4a
Section C: Ecosystems	
1. What are ecosystems, and how do organisms interact in ecosystems?	F4a
2. How does energy flow within an ecosystem?	F4a
3. How do ecosystems change?	F4a
4. What are the responsibilities of humans toward ecosystems?	F4a
LANGUAGE ARTS	
The overarching goals of the English-Language Arts curriculum are:	
To prepare all students to function as informed and effective citizens in our democratic society.	D, E, F, G
To prepare all students to function effectively in the world of work.	D, F
To prepare all students to realize personal fulfillment.	G
HISTORY AND SOCIAL SCIENCE	
GOAL OF KNOWLEDGE AND CULTURAL UNDERSTANDING	
Historical Literacy	
Develop a keen sense of historical empathy.	F4a
Understand the meaning of time and chronology.	F4a
Analyze cause and effect.	F2a
Understand the reasons for continuity and change.	F4a

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Recognize history as common memory with political implications.	F4a
Understand the importance of religion, philosophy, and other major belief systems in history	F4a
Ethical Literacy	
Recognize the sanctity of life and the dignity of the individual.	F4a, G3
Understand the ways in which different societies have tried to resolve ethical issues.	F4a
Understand that the ideas people profess affect their behavior.	F4a
Realize that concern for ethics and human rights is universal and represents the aspirations of men and women in every time and place.	F4a
Cultural Literacy	
Understand the rich, complex nature of a given culture—its history, geography, politics, literature, art, drama, music, dance, law, religion, philosophy, architecture, technology, science, education, education, sports, social structure, and economy.	F4a
Recognize the relationships among the various parts of a nation's cultural life.	F4a
Learn about the mythology, legends, values, and beliefs of a people.	F4a
Recognize that literature and art reflect the inner life of a people.	F4a, F4b
Develop a multicultural perspective that respects the dignity and worth of all people.	G3a, G3b
Geographic Literacy	
Develop an awareness of place.	F4a
Develop location skills and understanding.	F4a
Understand human and environmental interaction.	F4a
Understand human movement.	F4a
Understand world relationships and their historical, cultural, economic, and political characteristics.	F4a
Economic Literacy	
Understand the basic economic problems confronting all societies.	F4a
Understand comparative economic systems.	F4a
Understand the basic economic goals, performance, and problems of our society.	F4a
Understand the international economic system.	F4a
Understand the close relationship between social and political systems.	F4a
Understand the close relationship between society and the law.	F4a
Understand comparative political systems.	F4a
GOAL OF DEMOCRATIC UNDERSTANDING AND CIVIC VALUES	
National Identity	
Recognize that American society is now and always has been pluralistic and multicultural.	F4a
Understand the American creed as an ideology extolling equality and freedom.	F4a
Recognize the status of minorities and women in different times in American history.	F4a
Understand the unique experiences of immigrants from Asia, the Pacific islands, and Latin America.	F4a
Understand the special role of the United States in world history as a nation of immigrants.	F4a
Realize that true patriotism celebrates the moral force of the American idea as a nation that unites as one people the descendants of many cultures, races, religions, and ethnic groups.	F4a
Constitutional Heritage	
Understand the basic principles of democracy.	F4a
Understand the historical origins of basic constitutional concepts such as representative government, separation of powers, and trial by jury.	F4a
Civic Values, Rights, and Responsibilities	
Understand what is required of citizens in a democracy.	F4a
Understand individual responsibility for the democratic system.	F4a
GOAL OF SKILLS ATTAINMENT AND SOCIAL PARTICIPATION	
Participation Skills	
Develop personal skills.	G

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Develop group interaction skills.	G4b, G4c
Develop social and political participation skills.	A2e, D1a, E1a, G4
Critical Thinking Skills	
Define and clarify problems.	F2a
Judge information related to a problem.	F2a
Solve problems and draw conclusions.	F2a
Basic Study Skills	
The basic skills of history-social science include the ability to:	
1. Acquire information by listening, observing, using community resources, and reading various forms of literature and primary and secondary source materials.	F4
2. Locate, select, and organize information from written sources such as books, periodicals, government documents, encyclopedias, and bibliographies.	F4
3. Retrieve and analyze information by using computers, microfilm, and other electronic media.	F4, F5a
4. Read and interpret maps, globes, models, diagrams, graphs, charts, tables, pictures, and political cartoons.	F4a
5. Understand the specialized language used in historical research and social science disciplines.	F4a
6. Organize and express ideas clearly in writing and in speaking.	F1a, F3c

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Note: Material contained in this chart was adapted from *Statement on Competencies in Languages Other Than English Expected of Entering Freshmen: Phase I—French, German, Spanish.* Sacramento: The Academic Senates of the California Community Colleges, The California State University, and the University of California, 1986.

Colorado

Documents Utilized

Draft Model K-12 Reading and Writing Standards (no date)
Draft Model K-12 Mathematics Standards (no date)
Draft Model K-12 Science Standards (no date)
Draft Model K-12 History Standards (no date)
Draft Model K-12 Geography Standards (no date)

Background

Colorado vests the authority to grant diplomas, set graduation requirements, determine course offerings, and establish curriculum in its local school boards. Each district can either adopt the model state content standards or develop its own standards that meet or exceed the state standards. A new student assessment program is scheduled to begin during the 1996-97 school years that will measure Colorado's progress in achieving the model content standards. These state assessment results will be used to corroborate district assessment results.

Colorado

READING AND WRITING STANDARDS	NCEO CODE
1. Students use the correct forms of grammar/usage, mechanics/punctuation, and spelling in their writing.	F3c
2. Students write for a variety of purposes and audiences.	F3c
Students:	
Write for purposes such as telling stories, conveying technical information, and persuading.	F3c
Write for a wide range of audiences such as peers, teachers, and the community.	F3c
Plan, draft, revise, edit, and proofread their writing.	F3c
Use a variety of approaches such as figurative language, symbolism, dialect, and precise vocabulary to convey meaning.	F3c
Organize their writing using strategies such as listing, cause and effect, comparison and contrast, problem and solution, and narration to convey their purpose for writing.	F3c
Write to demonstrate critical thinking skills such as analysis, synthesis, and evaluation.	F3c
Distinguish when it is appropriate to use dialect, based on their purpose and audience for writing.	F3c
Use handwriting, keyboarding, and/or word processing to produce writing that is readable.	F3c, F5a
A Student Can:	
Think of and develop ideas for a variety of writing purposes such as telling a story, publishing a class newsletter, writing a letter to an adult, writing a book report, creating and producing a play, introducing a speaker or an event, or narrating a presentation.	F3c
Generate writing topics, develop ideas, and use organizational tools for planning his or her writing.	F3c
Use vocabulary and figures of speech, such as similes, to communicate his or her message clearly and precisely.	F3c
Adapt word choice to various audiences.	F3c
Give and receive feedback as an aid to revising and editing writing for a larger audience.	F3c
3. Students read and understand a variety of materials.	F3b
4. Students use reading and writing to enhance thinking and understanding.	F2a, F3b, F3c
5. Students evaluate the quality of their reading and writing and work toward improvement.	F3b, F3c
6. Students read to locate, select, and make use of information from a variety of print, media, and technological sources.	F3b
7. Students read and recognize literature as an expression of human experience.	F3b, F4b

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MATHEMATICS	
1. Students develop number sense and use numbers and number relationships in problem-solving situations and communicate the reasoning used in solving these problems.	F1, F2a, F3a
2. Students use algebraic methods to explore, model, and describe patterns and functions involving numbers, shapes, data, and graphs.	F3a
3. Students use data collection and analysis, statistics, and probability in problem-solving situations and communicate the reasoning and processes used in solving these problems.	F1, F2a, F3a
4. Students use geometric concepts, their properties and relationships in one, two, and three dimensions to model and solve real-world problems.	F2a, F3a
5. Students use a variety of tools and techniques to make and use measurements in both everyday circumstances and problems situations.	F3a
Students:	
Understand and apply the attributes of length, capacity, mass, time, temperature, perimeter, area, volume, and angle measurement.	F3a
Make and use measurements to describe and compare real-world phenomena.	F3a
Describe and use rates of change (e.g., temperature as it changes throughout the day, or speed as the rate of change of distance over time) and other derived and indirect measurements.	F3a
Select appropriate units (including metric and U.S. customary) and tools (e.g., rulers, protractors, compasses, and thermometers) to measure to the degree of accuracy required to solve a given problem	F3a
A Student Can:	
Estimate, use, and describe measures of length, perimeter, capacity, weight, time, and temperature.	F3a
Compare and order objects according to some measurable attribute.	F3a
Without using measuring tools, know the approximate measures of familiar objects (e.g., the width of your finger, the temperature of a room, and the weight of a hammer).	F3a
Select and use appropriate units of measurements in problem-solving situations.	F2a, F3a
6. Students understand, develop, and use computational skills and techniques, including estimation, mental math, paper-and-pencil, calculators, and computers, in problem-solving situations.	F2a, F3a, F5a
SCIENCE	
1. Students are able to design, conduct, communicate about, and evaluate a scientific investigation.	F1, F4a
2. Students know about and understand common properties, forms, and interactions of matter and energy.	F4a
3. Students know the characteristics and structure of living things, the processes of life, and how living things interact with their environment.	F4a
4. Students understand the processes and interactions of earth's systems and the structure and dynamics of earth and other objects in space.	F4a
Students know the composition of the earth, its history and the natural processes that shape it.	F4a
Students know the general characteristics of the atmosphere and the fundamental processes of weather.	F4a
A Student Can:	
Recognize that the sun is a major source of earth's heat and light.	F4a
Observe and describe local weather conditions, such as sunny, windy, and cloudy.	F4a
Recognize how our activities are affected by weather, such as the types of clothing we wear, travel plans, and the kinds of recreation in which we engage.	F4a
Collect and record weather data such as temperature and amount of cloud cover.	F4a
Students know the major sources of water, its uses and importance, and its cyclic patterns of movement through the environment.	F4a
Students know the structure of the solar system, the dynamics of the universe, and how space is explored.	F4a

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5. Students know ways that science, technology, and human activity have impact on the world and its resources.	F4a
6. Students know about and understand connections among the science disciplines, and the relationship of science to other areas of human activity.	F4a
HISTORY	
1. Students know the chronological organization of history and how to group people and events into major eras to identify and explain historical relationships.	F4a
2. Students know how to use the processes of historical inquiry. "Historical inquiry" refers to the process of studying history to find out what, who, why, when, etc., in a logical, problem-solving manner.	F4a
3. Students know how societies have developed and changed throughout history.	F4a
4. Students know the history of how technology and economic systems have developed and changed.	F4a
5. Students know the history of the development of political theories and institutions.	F4a
Students know how democracy has developed and been maintained in the United States.	F4a
A Student Knows:	
Historical figures in the United States who have advanced the rights of individuals and promoted the common good.	F4a
How national holidays, symbols, and celebrations exemplify fundamental ideas and principles of democracy in the United States.	F4a
The need for rules and personal responsibility in a school, neighborhood, community, state or region.	F4a
Students know the historical development and characteristics of various systems of government.	F4a
Students know how political power has been acquired and used throughout history.	F4a
Students know the history of relationships among different political powers and the development of international relations.	F4a
6. Students know the history of religions and philosophical ideas.	F4a
GEOGRAPHY	
1. Students know how to use maps, globes, and other tools to locate and derive information about people, places, and environments.	F4a
Students know how to use maps, globes, and other graphic tools.	F4a
Students develop knowledge of Earth to locate people places, and environments.	F4a
A Student Can:	
Draw a simple map of continents and oceans.	F4a
Locate earth's major physical and human features (including major cities, countries, bodies of water, etc.).	F4a
Locate places within his/her own and nearby communities in Colorado.	F4a
Locate major physical and human features in the Rocky Mountain region and the United States.	F4a
Students know to analyze the spatial organization of Earth's surface.	F4a
2. Students know the physical and human characteristics of places and study regions for the purpose of interpreting patterns of change.	F4a
3. Students understand how the processes of nature interact to shape Earth's surface patterns and systems.	F4a
4. Students understand how economic, political, cultural, and social processes interact to shape patterns of human populations, interdependence, conflict, and cooperation.	F4a
5. Students understand the effects of interactions between human and physical systems and recognize how interpretations of these effects can change.	F4a
6. Students apply knowledge of people, places, and environments to interpret the past and present and to plan for the future.	F4a

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Documents Utilized

Science Curriculum Frameworks--Draft (May, 1994)
History/Geography/Social Studies Curriculum Framework Commission: Content Standards--Draft (May, 1994)
The English Language Arts Curriculum Framework Document--First Draft (May, 1994)

Background

The Delaware Department of Public Instruction is currently engaged in a multi-year educational reform effort initiated in 1992. This reform effort will set standards for what children should know at grades 3, 5, 8, and 10. Four curriculum frameworks are being developed by Curriculum Framework Commissions which are comprised of about 45 volunteers, community leaders, administrators, parents, students, and members of the business community. It is hoped that the curriculum frameworks will be ready for implementation during the 1995-96 school year.

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MATHEMATICS	NCEO CODE
MATHEMATICAL THINKING PROCESSES	
1. Students will engage in **PROBLEM SOLVING** as the core of the entire mathematics program. Problem solving provides the context in which concepts and skills are introduced and learned, requires the application of a variety of strategies; develops persistence, self-reliance and confidence; integrates mathematical reasoning, communication and connections; and emphasizes the process that could lead to a reasonable solution.	
2. Students will develop their ability to **COMMUNICATE MATHEMATICALLY** by solving problems in which there is a need to obtain information from the real world through reading, listening and observing; to translate this information into mathematical language and symbols; to process this information mathematically; and to present results in written, oral, and visual formats.	
3. Students will develop their ability to **REASON MATHEMATICALLY** by solving problems in which there is need to investigate significant mathematical ideas in all content areas; to justify their thinking; to question and extend their thinking; and to construct their own learning.	
4. Students will develop their ability to make **MATHEMATICAL CONNECTIONS** by solving problems in which there is a need to view mathematics as an integrated whole and to integrate mathematics with other disciplines while allowing the flexibility to approach problems from within and outside mathematics in a variety of ways.	
UNIFYING THEMES	
5. Students will develop an understanding of **ESTIMATION, MEASUREMENT,** and **COMPUTATION** by solving problems in which there is a need to measure to a required degree of accuracy by selecting appropriate tools and units; to develop computing strategies and select appropriate methods of calculation from among mental math, paper, and pencil, calculators or computers; to use estimating skills to approximate an answer and to determine the reasonableness of results.	
6. Students will develop **NUMBER SENSE** by solving problems in which there is a need to represent and model real numbers verbally, physically, and symbolically; to use operations with understanding; to explain relationships between numbers; to apply the concept of a unit; and to determine the relative magnitude of real numbers.	

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7. Students will develop an understanding of **ALGEBRA** by solving problems in which there is a need to progress from the concrete to the abstract using physical models, equations, and graphs; to generalize number patterns; and to describe, represent, and analyze relationships among variable quantities.	
8. Students will develop **SPATIAL SENSE** and an understanding of **GEOMETRY** by solving problems in which there is a need to recognize, construct, transform, analyze properties of, and discover relationships between geometric figures.	
9. Students will develop an understanding of **STATISTICS** and **PROBABILITY** by solving problems in which there is a need to collect, appropriately represent, and interpret data; to make inferences or predictions; to present convincing arguments; and to model mathematical situations to determine the probability of events.	
10. Students will develop an understanding of **PATTERNS, RELATIONSHIPS,** and **FUNCTIONS** by solving problems in which there is a need to recognize and extend a variety of patterns; and to analyze, represent, model, and describe real-world functional relationships.	
Standard 1: Students will engage in PROBLEM SOLVING as the core of the entire mathematics program. Problem solving provides the context in which concepts and skills are introduced and learned; requires the application of a variety of strategies; develops persistence, self-reliance, and confidence; integrates mathematical reasoning, communication, and connections; and emphasizes the process that could lead to a reasonable solution.	D3e, F1, F2a, F3a, G2b
PERFORMANCE INDICATORS	
Through the investigation of meaningful problems, individually or cooperative groups while using appropriate technology, **all students in grades K-10 should be able to:**	F3a, F5a, G4b
1.01 Read and understand the problem.	F3a, F3b
1.02 Develop a plan for solving the problem.	F2a, F3a
1.03 Implement the plan and solve the problem.	F3a
1.04 Reflect on their answer with respect to the original problem.	F3a
1.05 Generalize strategies and solutions to new problem situations.	F2a, F3a
Standard 2: Students will develop their ability to COMMUNICATE MATHEMATICALLY by solving problems in which there is a need to obtain information from the real world through reading, listening, and observing; to translate this information into mathematical language and symbols; to process this information mathematically; and to present results in written, oral, and visual formats.	F1a, F2a, F3a, F3c
PERFORMANCE INDICATORS	
Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, **all students in grades K-10 should be able to:**	F3a, F5a, G4b
2.01 Model real-world situations using oral, written concrete, pictorial, graphical, and algebraic methods.	F1a, F3a, F3c
2.02 Use reading, listening, viewing, speaking, and writing to explain and develop mathematical ideas.	F1a, F3a, F3c
2.03 Use mathematical notation and language to describe and discuss real-world situations.	F3a
2.04 Read mathematics with understanding.	F3a
2.05 Develop common understanding of mathematical ideas and use generalizations discovered through investigation to formulate definitions.	F3a
2.06 Ask questions to clarify the situation.	F1a, F3a
Standard 3: Students will develop their ability to REASON MATHEMATICALLY by solving problems in which there is a need to investigate significant mathematical ideas in all content areas; to justify their thinking; to reinforce and extend their logical reasoning abilities; to reflect on and clarify their own thinking; to ask questions to extend their thinking; and to construct their own learning.	F2a, F3a

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	PERFORMANCE INDICATORS	
	Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, **all students in grades K-10 should be able to *use inductive and deductive reasoning to:***	F3a, F5a, G4b
3.01	Formulate and test conjectures;	F2a, F3a
3.02	Draw and then justify conclusions.	F1, F2a, F3a
3.03	Construct and follow logical arguments.	F2a
3.04	Use properties, models, known facts, and relationships to explain and defend their thinking.	F1, F3a
	Standard 4: Students will develop their ability to make MATHEMATICAL CONNECTIONS by solving problems in which there is a need to view mathematics as an integrated whole and to integrate mathematics with other disciplines while allowing the flexibility to approach problems from within and outside mathematics in a variety of ways.	F2a, F3a
	PERFORMANCE INDICATORS	
	Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, **all students in grades K-10 should be able to:**	F3a, F5a, G4b
4.01	Make connections linking conceptual and procedural knowledge.	F3a, F4
4.02	Solve problems involving other disciplines.	F2a
4.03	Use connections among mathematical topics.	F3a
4.04	Use various representations of the same concept.	F3a
4.05	Make the connection from manipulative solutions to algorithmic solutions to technological solutions.	F3a
4.06	Determine the reasonableness of a mathematical solution as it applies in a real-world situation.	F2a, F3a
	Standard 5: Students will develop an understanding of ESTIMATION, MEASUREMENT, and COMPUTATION by solving problems in which there is a need to measure to a required degree of accuracy by selecting appropriate tools and units; to develop computing strategies and select appropriate methods of calculation from among mental math, paper and pencil, calculators or computers; to use estimating skills to approximate an answer and to determine the reasonableness of results.	F2a, F3a, F5a
	PERFORMANCE INDICATORS	
	Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, building upon the K-5 expectations, **all students in grades 6-8 should be able to:**	F3a, F5a, G4b
5.23	Estimate then measure angles, circumference, volume and surface areas to the degree of accuracy required using standard and nonstandard units;	F3a
5.24	Convert measurements units within the same system;	F3a
5.25	Apply ratios, proportions and percents to real life situations;	F3a
5.26	Compute circumference; areas of triangles, parallelograms, trapezoids and circles; and surface area and volume of cylinders, triangular and rectangular prisms and pyramids;	F3a
5.27	Apply order of operations with symbols of inclusion;	F3a
5.28	Describe the most appropriate method for calculating an answer in a given situation;	F3a
5.29	Compute with rational numbers;	F3a
5.30	Determine if an estimate is an over-estimate or and under-estimate.	F3a
	Standard 6: Students will develop NUMBER SENSE by solving problems in which there is a need to represent and model real numbers verbally, physically and symbolically; to use operations with understanding; to explain the relationships between numbers; to apply the concept of a unit, and to determine the relative magnitude of real numbers.	F2a, F3a
	PERFORMANCE INDICATORS	
	Through the investigation of meaningful problems, individually or in cooperative groups	F3a, F5a, G4b

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	while using appropriate technology, building upon the K-5 expectations, **all students in grades 6-8 should be able to:**	
6.19	Connect different representations of rational numbers;	F3a
6.20	Apply multiple representations of numbers: integers, fractions, decimals, percents, exponents, and scientific notation;	F3a
6.21	Model integer representations using manipulatives;	F3a
6.22	Demonstrate an understanding of order relations for rational numbers;	F3a
6.23	Examine the relative effect of operations on rational numbers;	F3a
6.24	Use various forms of "one" to demonstrate the equivalence of fractions.	F3a
	Standard 7: Students will develop an understanding of ALGEBRA by solving problems in which there is a need to progress from the concrete to the abstract using physical models, equations, and graphs; to generalize number patterns; and to describe, represent, and analyze relationships among variable quantities.	F2a, F3a
	PERFORMANCE INDICATORS	
	Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, building upon the K-5 expectations, **all students in grades 6-8 should be able to:**	F3a, F5a, G4b
7.08	Represent situations with tables, graphs, verbal rules, and equations; and describe the interrelationships of the representations;	F3a
7.09	Model and solve real-world and mathematical problems using algebraic methods;	F2a, F3a
7.10	Evaluate algebraic expressions and formulas for given values of the variable;	F2a, F3a
7.12	Solve proportions;	F2a, F3a
7.13	Solve linear inequalities and non-linear equations using informal methods.	F2a, F3a
	Standard 8: Students will develop SPATIAL SENSE and an understanding of GEOMETRY by solving problems in which there is a need to recognize, construct, transform, analyze properties of and discover relationships between geometric figures.	F2a, F3a
	PERFORMANCE INDICATORS	
	Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, building upon the K-5 expectations, **all students in grades 6-8 should be able to:**	F3a, F5a, G4b
8.13	Identify, describe, compare and classify two and three dimensional figures;	F3a
8.14	Use a compass and straight edge as tools for basic geometric constructions;	F3a
8.15	Investigate and discover geometric relationships through the use of manipulatives, constructions and computer graphic software;	F3a, F5a
8.16	Create models of nets of three dimensional figures such as a cube, rectangular prism, cylinder and square pyramid;	F3a
8.17	Visualize and draw orthographic projections;	F3a
8.18	Discover and apply geometric properties and relationships such as congruence, similarity, parallelism, perpendicularity and symmetry;	F3a
8.19	Apply geometric properties and relationships to make conjectures.	F3a
	Standard 9: Students will develop an understanding of STATISTICS and PROBABILITY by solving problems in which there is a need to collect, appropriately represent, and interpret data; to make inference or predictions; to present convincing arguments; and to model mathematical situations to determine the probability.	F1, F2a, F3a
	PERFORMANCE INDICATORS	
	Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, building upon the K-5 expectations, **all students in grades 6-8 should be able to:**	F3a, F5a, G4b
9.11	Collect, organize, describe, and make predictions with data;	F3a

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9.12 Construct and describe displays of data such as stem-and leaf plots, scatter plots, box plots, and circle graphs;	F3a
9.13 Make and evaluate arguments that are based on data analysis;	F2a, F3a
9.14 Calculate and use mean, median, mode and range to interpret data;	F2a, F3a
9.15 Analyze a sample to make inferences about a population;	F2a, F3a
9.16 Compare and make predictions based on theoretical and experimental probabilities;	F2a, F3a
9.17 Construct a sample space to determine theoretical probabilities.	F2a, F3a
Standard 10: Students will develop an understanding of PATTERNS, RELATIONSHIPS, and FUNCTIONS by solving problems in which there is a need to recognize and extend a variety of patterns; and to analyze, represent, model, and describe real-world functional relationships.	F2a, F3a
PERFORMANCE INDICATORS	
Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, building upon the K-5 expectations, **all students in grades 6-8 should be able to:**	F3a, F5a, G4b
10.07 Recognize, analyze, create, extend, describe and generalize a wide variety of patterns and relationships;	F2a, F3a
10.08 Analyze functional relationships to explain how to change in one quantity results in a change in another;	F2a, F3a
10.09 Identify geometric patterns and relationships;	F2a, F3a
10.10 Detect patterns and functions from statistical data;	F2a, F3a
10.12 Use patterns and functions to represent and solve problems.	F2a, F3a
HISTORY/GEOGRAPHY/SOCIAL STUDIES	
STANDARDS FOR GRADES 6-8	
HISTORY	
Standard 1: Students should be able to examine historical materials relating to a particular region, society, or theme and analyze change over time, and make logical inferences concerning cause and effect.	F2a, F4a
Standard 2: Students should be able to examine historical materials in order to compare and contrast differing sets of ideas, personalities, institutions, etc., by identifying similarities and differences.	F4a
Standard 3: Students should be able to examine historical documents, artifacts, and other materials, and analyze them in terms of credibility, and the purpose, perspective, or point of view for which they were constructed.	F4a
Standard 4: Students should be able to demonstrate a knowledge of major historical developments and their continuing influences on history.	F4a
GEOGRAPHY	
Standard 1: Students should be able to demonstrate "mental maps" of world sub-regions which integrate human activity and features of the natural environment.	F4a
Standard 2: Students should be able to understand the major processes which shape patterns in the natural environment at the world scale, and relate these processes to a general knowledge of the physical environments of world regions.	F4a
Standard 3: Students should be able to demonstrate understanding of the processes affecting the location of economic activities in different world regions.	F4a
Standard 4: Students should be able to demonstrate understanding of the processes affecting the location of economic activities in different world regions.	F4a

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Standard 5: Students should be able to analyze how conflict and cooperation among people contributes to the division of the Earth's surface into distinctive cultural regions and political territories.	F2a, F4a
ECONOMICS	
Standard 1: Students should be able to compare and contrast the ways in which individuals, businesses, communities, and governments make economic decisions and potential consequences of those decisions.	F4a
Standard 2: Students should be able to compare and contrast production, distribution, and exchange in different economic systems throughout the world.	F4a
Standard 3: Students should be able to show that the structure of economic systems has a relationship to the cultural values, resources, and technologies within societies and around the world.	F4a
CIVICS	
Standard 1: Students should be able to identify both contemporary and historical roles of the three branches of government in resolving major political crises, and the possible conflict between the nation and the state.	F4a
Standard 2: Students should be able to describe the operation of the federal and state governments, and demonstrate how those governments have been modified over time to adapt to changing circumstances.	F4a
Standard 3: Students should be able to analyze the role of individuals in the governmental process in varying historical and cultural settings.	F2a, F4a
Standard 4: Students should be able to describe the structure and operation of major contemporary political systems.	F4a
SCIENCE	
Standard 1: MATERIALS AND THEIR PROPERTIES, GRADES 5-8	
A. Chemical and Physical Properties	
1a. Construct a model of simple common molecules such as water and relate the molecular arrangement and motion to the different physical states of the material.	F4a
2a. Use a variety of instruments to quantitatively measure the physical properties of a material (melting point, boiling point, solubility, acidity).	F4a
2b. Identify and describe, by observing laboratory activities and everyday events, how the properties of the new substances formed during chemical reactions differ from the properties of the original material (rusting, cooking).	F1, F4a
3a. Investigate the qualitative effects of temperature, volume, and pressure changes on a sample of gas (expansion of heated balloon).	F4a
B. The Particulate Model	
2a. Construct models of simple common molecules such as water, hydrogen, oxygen, and sodium chloride, and discuss the relationship of these molecular structures to the physical properties of each material. Hypothesize how these material might interact with one another.	F2a, F4a
2b. Investigate changes of state for common substances and develop accurate descriptions of those changes of state using the particulate model.	F1, F4a
C. Mixtures and Solutions	
1a. Identify the component parts of a solution, and demonstrate the use of ratios and percentages in preparing solutions of different concentrations.	F4a
2a. Investigate the relationship of various properties of solution (taste, boiling point, freezing point, color, pH), to the concentration of the solute.	F4a

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D. Reactions of Materials and the Conservation to Matter	
2a. Use laboratory investigations to demonstrate the formation of new materials. Use the same or different experiments to measure the mass of substances before and after a chemical change to demonstrate conservation of matter (e.g.; electrolysis of water, precipitation, gas [CO2] evolution).	F4a
E. Technology and Application	
1a. Identify how physical and chemical changes are used in the application and/or development of materials essential to modern life (cooking, concrete, adhesives, air conditioning).	F4a
1b. Investigate and report on an example of the influence of material technology on society or on the selection of material for a specific use (iron, copper, gunpowder, cotton, wool, nylon, solar cells).	F4a
1c. Explain how a civilization's values, needs, and resources influence what kind of technologies are developed and accepted by society.	F4a
Standard 3: EARTH'S DYNAMIC SYSTEMS, GRADES 5-8	
A. Properties and Composition of Rocks and Soil	
1a. Sort and group rocks and minerals into natural classification systems using physical and chemical tests.	F4a
2a. Design and build models to demonstrate how wind and water shape the land.	F4a
B. Forces That Shape Earth	
1a. Plot the location of earthquakes, volcanoes, and major mountain systems to determine the existence and movement of crustal plates.	F4a
C. Atmospheric Dynamics	
1a. Perform daily weather measurements, over an extended period of time, using a variety of instruments (barometer, anemometer, sling psychrometer). Compare and contrast the measurements to local and regional weather data.	F4a
2a. Use U.S. weather maps to identify air masses, fronts and their movements, and to describe the effects of weather on specific geographic locations.	F4a
2b. Discuss the origin and impact of the great storms of the east coast (hurricanes, northeasters, snow and ice storms). Assess adequacy of emergency planning procedures to respond to the damage which such storms can cause.	F4a
D. Hydrologic Dynamics	
1a. Design simple experiments to demonstrate the influence of various factors on the hydrologic cycle.	F4a
2a. Investigate the influence of the Atlantic Ocean on erosion of coastal areas, commerce, and the climate of Delaware.	F4a
E. Geologic Times	
1a. Construct models and geological profiles to demonstrate the age relationship of sedimentary rock layers.	F4a
F. Stewardship of Earth's Resources	
2a. Determine the composition and suitability for use of various local water sources (rivers, streams, wells, etc.); investigate reasons for variations in the results, And determine how local regulations effect water use.	F4a
G. Technology and Applications	
1a. Use technology (maps, satellite imagery, and instrumentation's) to locate possible sources of atmospheric pollution. Compare sources with meteorological data to locate the probable origin of local contamination.	F4a, F5a
Standard 5: LIFE PROCESSES, GRADES 5-8	
A. Structure/Function Relationship	
1a. Use microscopes to observe cellular structures. Discuss the function of these observed structures and determine whether the cell is plant or animal.	F4a, F5a
2a. Investigate and describe various life processes (e.g., digestion, locomotion, fermentation,	F4a

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behavior) in unicellular organisms such as amoebae, paramecium, and yeast.	
B. Matter and Energy Transformations	
1a. Conduct simple experiments with green plants to determine the requirement s and products of photosynthesis. Draw conclusions about the relationship of matter and energy in plants.	F2a, F4a
C. Internal Balance	
1a. Use models or organisms to develop an understanding of how organ and organ systems in plants and animals work together for the well being of the entire organism.	F4a
D. Life Cycles of Living Organisms	
1a. Observe, describe, and measure changes that occur in an organism (e.g., bean plant, butterfly, frog chicken) as it develops from a seed or fertilized egg to and adult.	F4a
E. Health and Well-Being	
1a. Select a relevant health topic (e.g., diet, drugs, exercise, disease), write a literature research paper that explains how normal life processes are affected, and give an oral presentation on the results of the research.	F1a, F3c, F4a
F. Technology and Applications	
1a. Investigate the impact of improved sanitation measures on the health of the local population using a full range of community resources such as guest lecturers, field trips, libraries, and community agencies.	F4a
ENGLISH LANGUAGE ARTS	
Standard 1: Students will use written and oral English appropriate for various purposes and audiences.	F1a, F3c
1. WRITTEN COMMUNICATION	
Writing is a flexible and recursive process which encompasses identifying purposes and audiences, prewriting, drafting, revising, editing, and publishing. The writer will produce texts which exhibit the formal conventions and qualities defined for effective writing appropriate for each developmental level.	F3c
A. The student writes argumentative and persuasive texts exhibiting the following qualities:	
1. The writer takes a clear-cut stand on the selected issue.	F3c
2. The writer says concisely what is meant.	F3c
3. The writer exhibits knowledge of the audience through:	F3c
a. Selecting a language appropriate to the audience,	F3c
b. Building a relevant similarity with the audience, and	F3c
c. Predicting audience response and building a case accordingly.	F3c
4. The writer selects a structure (or organizational pattern) for the argument and maintains it throughout the piece.	F3c
5. The writer exhibits knowledge of the purpose for the piece.	F3c
6. The writer establishes credibility and exhibits knowledge of the topic.	F3c
7. The writer supports arguments with relevant sources ranging from personal opinions and example to quotations and other opinions to statistics and data.	F3c
8. The writer exhibits cogent reasoning.	F3c
B. The students write narrative texts, both fiction and nonfiction, exhibiting the following qualities:	
1. The writer carefully selects events, descriptive and explanatory details, and dialogue to bring the narrative to life for the reader.	F3c
2. The writer follows a structure that exhibits:	F3c
a. A definite beginning to arouse the reader's interest and to provide the information necessary to understand the rest of the narrative,	F3c
b. A middle that sustains interest by depicting a series of events with accompanying details, and	F3c
c. An ending that satisfies the interest by revealing the final outcome and perhaps some reflection by the author on the meaning and significance of the experience.	F3c

Delaware

	NCEO CODE
3. The writer exhibits a strong sense of organization by selecting a sequence of events so that one event moves smoothly into another.	F3c
4. The writer selects every event, detail, and line of dialogue with the purpose of telling the story. The writer does not try to communicate everything that happened—only what gives meaning to the story.	F3c
5. The writer may use dialogue to:	
a. Add realism,	F3c
b. Move the action forward, and	F3c
c. Reveal character.	F3c
6. The writer selects and sustains the following:	F3c
a. A language natural to the narrative,	F3c
b. A point of view appropriate to the narrative, and	F3c
c. Verb tense (or tenses) consistent with the flow of the narrative.	F3c
C. The student writes expository text, both technical (that which is used in the workplace) and academic (that which is used in institutions of higher learning), exhibiting the following qualities:	
1. The writer presents relevant information accurately, clearly, concisely, and objectively.	F3c
2. The writer adjusts his material according to the readers' capabilities and interests.	F3c
3. The writer selects an appropriate method of analysis (i.e., definition, cause/effect, comparison/contrast, process analysis).	F3c
4. The writer uses and documents primary and secondary sources.	F3c
5. In addition to demonstrating the above qualities, the writer of academic text:	
a. Finds and focuses on a subject;	F3c
b. Gathers and records information;	F3c
c. Develops the composition through the use of carefully selected reasons/examples, incidents/anecdotes, facts and statistics, and/or sensory details;	F3c
d. Follows a structure that includes introduction with a clear thesis, body, and conclusion;	F3c
e. Uses appropriate transitions to assure cohesion.	F3c
6. In addition to demonstrating the above qualities, #1 to #4, the writer of a technical text:	
a. Presents factual information to answer a request or supply needed data;	F3c
b. Collects and organizes technical data;	F3c
c. Organizes data into technical formats (i.e., memos, letters, proposals, visuals, reports, messages, résumés, applications, etc.); and	F3c
d. Selects words, sentence structure, and layout to facilitate reader comprehension.	F3c
2. ORAL COMMUNICATION The speaker draws upon the language of his or her home, community, culture, and the public language of the larger culture to construct oral texts. The speaker will demonstrate oral language proficiency in speech situations, such as conversations, interviews, collaborative group work, oral presentations, and formal speeches. In addition to the qualities defined for effective writing, the oral presentation will exhibit the following characteristics:	
A. The speaker creates a strong impression of being secure, comfortable, and in command of the situation.	F1a
B. The speaker controls volume, tone, speed, and enunciation to achieve an intended effect.	F1a
C. The speaker indicates attentiveness to others' contributions or feedback through oral feedback, facial expression, eye contact, and gestures.	F1a
D. The speaker's word choices effectively support what he/she is saying.	F1a
E. The speaker verbalizes and responds indicating interest, involvement, and enthusiasm.	F1a
F. The speaker engages in effective group dynamics and makes an obvious positive contribution to the intended outcome.	F1a
G. The speaker constructs oral texts using criteria specified for a written discourse to communicate effectively with a range of audiences for a variety of purposes.	F1a
H. The speaker incorporates a range of technological devices, when appropriate, for the presentation.	F1a

Delaware

	NCEO CODE
Standard 2: Students will construct, examine, and extend the meaning of literary, informative, and technical texts through listening, reading, and viewing.	
A. The student applies efficient, effective, decoding strategies to process printed texts.	F3b
1. The student silently reads grade-appropriate texts:	F3b
a. With accuracy, and	
b. At an acceptable rate.	
2. The student orally reads grade appropriate text:	F1a
a. With expressiveness,	
b. With accuracy, and	
c. At an acceptable rate.	
B. The student self-monitors comprehension.	F2a, F3b
1. The student generates a purpose for reading, listening, or viewing.	F2a, F3b
2. The student assimilates information to revise predictions and make inferences.	F2a, F3b
3. The student reviews for clarification.	F3b
4. The student adjusts rate.	F3b
C. The student demonstrates an overall understanding of oral and printed texts.	F3b
1. The student can, through speaking and/or writing, retell a story or restate an informative text.	F1a, F3b
2. The student organizes the important points of the text via summaries, outlines, and/or graphic organizer.	F3b
3. The student gives written reaction to text.	F3c
D. The student critically analyzes and evaluates information and messages presented through print and speech sources.	F2a
1. The student synthesizes information.	F2a
2. The student formulates and expresses opinions about text and media presentations.	F1, F2a
3. The student responds to questions requiring critical thinking.	F2a
4. The student draws conclusions.	F2a
5. The student evaluates persuasive texts and media presentations for bias and misinformation.	F2a
6. The student evaluates expository and technical texts for their completeness, accuracy, and clarity of communication.	F2a, F3b
7. The student evaluates the literary merit of various texts and media presentations.	F2a, F4b
E. The student develops an informed and critical understanding of the nature of mass media, the techniques used by them, and the impact of these techniques.	F2a, F4
1. The student evaluates how the content, technique, and form of electronic messages affect him/her.	F2a, F4
2. The student recognizes a variety of persuasive and propagandistic techniques and how they are used in a variety of forms including advertising, political campaigns, documentaries, and news formats.	F2a, F4
F. The student integrates from several sources and applies this information.	F2a
1. The student makes decisions.	F2a
2. The student solves problems.	F2a
3. The student completes tasks.	F2a
4. The student creates products.	F4
Standard 3: Students will access, organize, and evaluate information gained by listening, reading, and viewing.	
A. The student identifies, locates, and selects sources of information relevant to a defined need.	F4
1. The student uses a variety of sources for information and ideas.	F4
2. The student extracts information relevant to the purpose.	F4
3. The students gathers information and ideas using technology.	F4, F5a
B. The student organizes, manipulates, and expresses the information and ideas relevant to a defined need.	F4
1. The student develops an efficient process for research manipulation.	F4
2. The student applies higher-order thinking skills in selecting and organizing information.	F2a, F4
3. The student uses technology to synthesize information into a meaningful format.	F4, F5a

Delaware

	NCEO CODE
4. The student presents information which is sufficient in quantity and depth to suit the purpose.	F4
5. The student represents information, ideas, and experiences using text, drawings, graphs, diagrams, photographs, videos, and graphics.	F4
C. The student effectively evaluates both sources and information.	F4
1. The student selects sources which are acknowledged and authoritative.	F4
2. The student analyzes sources and information for accuracy, bias, stereotypes, and validity.	F2a, F4
3. The student acknowledges and addresses any bias and/or discrepancies which may be present in source materials.	F4
4. The student interprets the information, as appropriate, to the purpose.	F2a, F4
5. The student formulates logical conclusions to complete the task.	F2a, F4
Standard 4	
Students will use literary knowledge to connect self to society and culture. Literature is a central and integrative element of culture and develops an understanding and appreciation of humanity.	
A. The student responds to literature using personal experience.	F4b, G3a, G3b
1. The student identifies with or sympathizes with characters of varying ages, genders, nationalities, races, cultures, and religions.	F4b, G3a, G3b
2. The student questions, challenges, or rejects characters based on a clear understanding of motivation and situations.	F2a, F4b
3. The student relates incidents in the text to life.	F4b
4. The student reacts to how narrative point of view affects the reader, the author, and the text.	F4b
5. The student relates principal ideas of literary text to personal experiences.	F4b
6. The student explores and experiments with other literary texts as a result of the emotional response.	F4b
B. The student responds to literature using interpretive, critical, and evaluative processes.	F2a, F4b
1. The student makes inference about content, events, characters, setting, author's purpose.	F2a, F4b
2. The student interprets the use of literary devices (e.g., figurative language, allusion, diction, dialogue, description, etc.), tone, mood.	F4b
3. The student evaluates literary qualities such as use of language, content, and literary elements.	F2a, F4b
4. The student evaluates the suitability of characters' actions in a particular event, the emotional appeal of the text, and/or the author's method (adequacy or validity of the genre and the relevancy of the approach).	F4b
C. The student responds appreciatively to a broad range of culturally significant literary texts written by historical and modern authors.	F4b
1. The student values literary texts representing the rich diversity of American cultural heritage inclusive of ages, genders, nationalities, races, and religions.	F4b, G3b
2. The student values literary texts representative of various historical periods ranging from the ancient world to the present.	F4a, F4b
3. The student gains esteem from world literature.	F4b, G2a
D. The student uses literature as a basis for understanding self and society.	F4b
1. The student perceives literary themes as a means to develop a sense of self and connectedness to others and to develop an awareness of major social and political issues.	F4b
2. The student appreciates the interrelationship between literature and the arts as communication systems expressed through a variety of media.	F4b

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District of Columbia

Document Utilized

Baseline Indicators: A Framework for Accountability -- Draft (October, 1993)

Background

The *Baseline Indicators: A Framework for Accountability* is a product from the on-going efforts of the Interagency Standards Committee, and should be considered as a draft. This committee was one of four that were formed following the January 23, 1993 "Education Summit," where a commitment was made to improve the DC Public Schools by providing "enhanced educational standards and student achievement, through inter-agency cooperation and communication." The indicators were identified by surveying various indicator systems and other resources. They were intended to become the foundation for annual reports on the progress of schools in the school system. DC Public Schools are also involved in the process of setting performance standards based upon the baseline indicators.

Note: For the comparison to NCEO's grade 8 model, the following Washington, DC educational goals did not apply and were not matched: Increased graduation rates, quality teachers, and post-secondary opportunities.

District of Columbia

EDUCATIONAL GOALS	NCEO CODE
Goal 3: IMPROVED ACADEMIC ACHIEVEMENT	no match
Reading	
1. Standardized test(s) administered	
a. Percent of students scoring by decile on the CTBS	no match
b. Percent of students scoring above national norm on the CTBS	no match
Mathematics	
2. Standardized test(s) administered	
a. Percent of students scoring by decile on the CTBS	no match
b. Percent of students scoring above national norm on the CTBS	no match
c. Percentage of all public school 8th graders who scored at the following levels in mathematics achievement (1990) and of 4th and 8th graders on the 1992 NAEP: Below Basic, Basic, Proficient, Advanced	F3d, F3e
Science	
4. Standardized test(s) administered	
a. Percent of students scoring by decile	F3d
b. Percent of students scoring above national norm	F3d
Taking a Foreign Language	
5. Percent of students who took a foreign language prior to 9th grade	F4a
6. Number of students enrolled in foreign languages	F4a
Gifted and Talented	
13. Number of schools with gifted and talented programs	no match
14. Percent of students participating in gifted and talented programs	no match

District of Columbia

	NCES CODE
Chapter 1	
15. Number of students who successful exited the Chapter 1 program from the previous year.	no match
16. Number of Chapter 1 schools showing improvement in promotion rates over previous year.	no match
17. Number of Chapter 1 schools showing improvement in test scores over pervious year.	no match
18. Number and percent participating in sports- by sport, grade and gender	C1b
GOAL 6: SAFE AND CARING ENVIRONMENT	
1. Number of schools with health clinics	no match
2. Number of student visits to health clinics	no match
3. Number of schools with drug education programs	no match
4. Drug/alcohol incidents reported	no match
5. Number of drug-related arrests	no match
6. Total amount of deferred maintenance (millions of dollars)	no match
7. Schools with HIV and STD prevention programs	no match
8. Schools with nutrition education programs	no match
9. Schools with programs for children of drug-addicted parents	no match
10. Schools with programs to reduce student suicide and stress	no match
11. Schools with programs to reduce crime and gangs	no match
12. Schools with mediation and conflict resolution programs	no match
13. Schools with pregnancy prevention programs	no match
14. Schools with programs for homeless children	no match
15. Percent of 4th, 8th and 10th grade students who passed the Physical Assessment Test (Pilot) by gender	C3a
16. Percent classrooms air conditioned	no match
17. Percent of D.C. public high school teachers who reported that the following were moderate or serious problems in their schools: physical abuse of teachers, verbal abuse of teachers, robbery or theft, vandalism of school property	no match
18. Percentage of D.C. public schools students who reported being physically abused.	no match
19. Number of suspensions for violent or disruptive behavior.	A1b, E1b
GOAL 7: CULTURAL ARTS	
Art	
2. Percent junior high schools offering art instruction	no match
4. Number of art teachers (resident or itinerant, by level)	no match
5. Total number of art teachers	no match
Music	
7. Percent junior high schools offering both vocal and instrumental music	no match
9. Number of vocal music teachers (resident or itinerant, by level)	no match
10. Number of instrumental music teachers (resident or itinerant, by level)	no match
11. Total number of music teachers	no match
GOAL 8: PARENTAL INVOLVEMENT	
1. Number of parent volunteers including Parent Partners	B2b
2. Number of parents present at "Back-to-School" nights	B2b
3. Number of parents involved on the local school restructuring teams	B2b
4. Number of parents involved as member of the parent organizations such as PTA/HSA/PTSA	B2b
5. Percent of schools with active parent organizations	B2b
6. Number of parents attending Citywide Parent Conference	B2b
7. Number of schools with certified Local School Restructuring Teams	no match

Florida

Documents Utilized

Blueprint 2000: A System of School Improvement and Accountability (June 1993)
Transition System: Companion to Blueprint 2000 (1993)

Background

Since 1985, Florida has had curriculum guides that identify the course content and intended outcomes for all courses in grades 6-12. Districts must adopt student-performance standards for each course based on these guidelines. In 1991, the legislature established a commission on student-performance standards. It identified 10 performance standards based on the competencies identified by the U.S. Secretary of Labor's Commission on Achieving Necessary Schools. The content and performance standards describe student learning at different grade levels (e.g., K-3, 4-5, 6-8, and 9-10). In 1993, the state began developing pre-K-12 curriculum frameworks that will identify the essential content in each subject and give sample benchmark outcomes. They will not include state-mandated performance standards.

Note: The following goals did not apply to and were not matched to the NCEO model for grade 8: Graduation Rate and Readiness for Postsecondary Education and Employment, Teachers and Staff, and Adult Literacy.

Florida

	NCEO CODE
GOAL 3: STUDENT PERFORMANCE: Students successfully compete at the highest levels nationally and internationally and are prepared to make well-reasoned, thoughtful, and healthy lifelong decisions.	C1, F2a, F3d
Standard 1: Florida students locate, comprehend, interpret, evaluate, maintain, and apply information, concepts, and ideas found in literature, the arts, symbols, recordings, video and other graphic displays, and computer files, in order to perform tasks and/or for enjoyment.	F1, F4a, F4b, F5a
OUTCOMES While performing individual and group tasks, students:	
1. Locate data and determine the main idea or essential message;	F4
2. Identify relevant details and facts;	F2a, F4
3. Evaluate accuracy, appropriateness, style, relevance, and plausibility;	F2a, F4b
4. Analyze information, concepts, and ideas relative to their own value system;	F2a
5. Use ideas, concepts, and informational resources for aesthetic and recreational purposes;	F4
6. Independently complete a task which requires the use or application of information, concepts, or ideas; and	D3e
7. Evaluate and make valid inferences from new, incomplete, or nonverbal information.	F2a
Standard 2: Florida students communicate in English and other languages using information, concepts, prose, symbols, reports, audio and video recording, speeches, graphic displays, and computer-based programs.	F1, F1a, F3c, F5a
OUTCOMES While performing individual and group tasks, students:	
1. Completely and accurately record information in writing and other media, and communicate that information, in turn, through a variety of media;	F1, F3c
2. Compose and create, through a variety of oral, visual, and written media, communications such as letters, reports, directions, manuals, and proposals;	F1a, F3c

Florida

	NCEO CODE
3. In all communications using English and other languages, accurately use language, graphic representations, styles, organizations, and format appropriate to the language, information, concept, or idea and the subject matter, purpose, and audience;	F1a, F3c
4. Prepare communications through a variety of media which include supporting documentation and detail; and	F3c
5. Check, edit, and revise communications to ensure appropriate form, emphasis, grammar, spelling, and punctuation.	F3c, F4a
Standard 3: Florida students use numeric operations and concepts to describe, analyze, disaggregate, communicate, and synthesize numeric data and to identify and solve problems.	F2a, F3a
OUTCOMES While performing individual and group tasks, students:	
1. Accurately identify and perform appropriate numeric procedure with problems found in numeric, symbolic, or word form;	F3a
2. Estimate approximate numeric solutions to problems without use of calculating devices; and	F3a
3. Accurately analyze, synthesize, and evaluate numeric ideas, concepts, and information through appropriate formulae, symbols, theorems, equations, tables, graphs, diagrams, and charts.	F2a, F3a
Standard 4: Florida students use creative thinking skills to generate new ideas, make the best decisions, recognize and solve problems through reasoning, interpret symbolic data, and develop efficient techniques for lifelong learning.	F2a, F3a
OUTCOMES While performing individual and group tasks, students:	
1. Use imagination, combine ideas or information in new ways, and make connections between seemingly unrelated ideas by discovering a rule or principle underlying the relationship between two or more objects and use the rule or principle to solve a problem;	F2a
2. Clarify goals and recognize constraints to their attainment and evaluate and choose the best alternative;	F2a
3. Recognize that a problem exists, define the problem, investigate possible causes of the problem, identify possible solutions, analyze, evaluate, and select the best solution(s), and implement the solutions;	F2a
4. Organize and intellectually process symbols, pictures, objects, and information in a way which permits the mind to generate the reality of what is being represented; and	F2a
5. Develop and use individually effective and efficient learning techniques that permit them to apply new knowledge and skills in different ways.	F4
Standard 5: Florida students display responsibility, self-esteem, sociability, self-management, integrity, and honesty.	D, D3, E1, G2a, G4
OUTCOMES While performing individual and group tasks, students:	
1. Exert a high level of effort and perseverance toward goal attainment;	D3e
2. Exhibit diligence in reaching high-task accomplishment and performance by setting high standard, paying needed attention to detail, displaying high standard of attendance and punctuality, adapting to variable environments, and approaching and completing tasks with enthusiasm, vitality, and optimism;	A1a, D3e, F3d, G
3. Demonstrate a realistic and positive view of themselves as unique individuals;	G2a
4. Demonstrate friendliness, assertiveness, leadership, adaptability, empathy, and politeness in familiar and unfamiliar groups;	G3a, G4
5. Exhibit interest in what others say and do;	G4
6. Deal with persons and situations with integrity, reliability, and honesty;	E1a
7. Exhibit civic, personal, and social responsibility;	D1a, E1a

Florida

	NCEO CODE
8. Demonstrate behaviors that support physical wellness and personal well-being; and	C1, G
9. Assume a positive role in the family, work place, and community.	A2e, D1a, E1a, E3b
Standard 6: Florida students will appropriately allocate time, money, materials, and other resources.	F4
OUTCOMES While performing individual and group tasks, students:	
1. Identify and prioritize activities in an appropriate sequence and develop, implement, and adjust an effective schedule in order to accomplish a goal;	D3e, F4
2. Prepare a budget appropriate to the activities required for goal attainment; maintain accurate records of actual costs and revenues; and revise the budget plan as needed;	F4
3. Identify and acquire the materials and supplies needed for completion of the activity and anticipate how those materials can be best stored and distributed to complete the activity with the least cost and greatest efficiency; and	F4
4. Identify the human skills, knowledge, and values necessary to successfully complete the activity; describe how to make successful matches between the persons best capable of completing the activity and the activity itself; and provide meaningful feedback on task completion to those involved.	F4
Standard 7: Florida students integrate their knowledge and understanding of how social, organizational, informational, and technological systems work with their abilities to analyze trends, design and improve systems, and use and maintain appropriate technology.	F2a, F5a
OUTCOMES While performing individual and group tasks, students:	
1. Identify the need for information, select possible information and evaluate its appropriateness, and then obtain the information from existing sources, or create it;	F2a, F4
2. Organize, process, and maintain in a systematic fashion, print and other forms of technologically stores information and transform the information into appropriate formats to enhance the accomplishment of a goal;	D3e, F5a
3. Analyze trends and the performance of systems to predict the impact of these trends and performances on goal attainment;	F2a
4. Make suggestions to modify existing systems in order to enhance goal attainment;	F1, F2a
5. Select the procedures or technology that will best facilitate goal attainment by visualizing the necessary methods and applicable technology, choosing, installing, and monitoring the device or system which will produce the best results; and	F2a, F5a
6. Demonstrate competence in solving problems in the sue of technology, including generating workable solutions and identifying the appropriate person or place from which to obtain the needed assistance.	F2a, F5a
Standard 8: Florida students work cooperatively to successfully complete a project or activity.	G4b
OUTCOMES While performing individual and group tasks, students:	
1. Contribute ideas and make suggestions to a group effort to solve a problem or complete an activity in support of attainment of a goal;	F2a, G4b
2. Assist a group to be successful by doing their own share of the tasks necessary to complete a task and encourage other group members by listening and responding appropriately to their contributions, identifying and building upon the strengths of individual members of the group, helping to resolve differences within the group which impede goal attainment; and	D1a, E3b, F1, G4c
3. Help others learn by helping them to identify and apply related concepts and theories to the activity, identify needed skills, knowledge, and values which will facilitate goal attainment, and providing meaningful feedback, including reinforcement of others' successful performance.	E3b, F1

Florida

	NCEO CODE
Standard 9: Florida students establish credibility with their colleagues through competence and integrity and help their peers achieve their goals by communicating their feelings and ideas to justify or successfully negotiate a position which advances goal attainment.	D3e, E3b, F1, G1b
OUTCOMES While performing individual and group tasks, students:	
1. Effectively communicate thoughts, ideas, and values to influence others toward action which will facilitate goal attainment;	F1, D3e
2. Justify positions logically while taking meaningful viewpoints of others into consideration and making positive use of the rules and values followed by others; and	F1, G3a
3. Work toward an agreement with others that will further goal attainment by resolving divergent interests and points of view, clarifying points of view, and adjusting quickly to new facts or ideas, and making reasonable compromises that promote goal attainment.	F1, F4b, G4c
Standard 10: Florida students appreciate their own culture and the cultures of others, understand the concerns and perspectives of members of other ethnic and gender groups, reject the stereotyping of themselves and others, and seek out and utilize the views of persons from diverse ethnic, social, and educational backgrounds while completing individual and group projects.	G3b
OUTCOMES While performing individual and group tasks, students:	
1. Demonstrate appreciation of their own culture and the cultures of others;	G3b
2. Cooperate with persons of different gender, ethnic, or socioeconomic backgrounds to successfully accomplish tasks; and	G3b, G4b
3. Recognize bias and stereotyping in media, literature, and visual and performing arts.	F4, G3b
ASSESSMENT Assessment for school improvement and accountability should minimize state level intervention, empower local school communities, hold schools accountable, and improve and inform instruction. There is a legitimate state interest to report on the progress of education but this interest should be constrained to a minimum amount of information necessary for state level reporting and should not place undue burdens on the school improvement process.	no match
Goal 3 requires an assessment system that can be partially implemented immediately and that will allow for a transition to the Blueprint 2000 Student Assessment System. In moving through the transition: Assessment methods must be developed and implemented for those performance standards and outcomes that cannot be assessed using existing methods. A new version of the High School Competency Test will be developed to begin to reflect the Blueprint 2000 performance standards. The Florida Writing Assessment will continue to be developed and implemented. Norm-referenced test (NRT) requirements in grades 4, 8, and 10, including the Grade Ten Assessment Test (GTAT), will be continued at least until the Blueprint 2000 Assessment System is fully implemented.	no match
KEY DATA ELEMENTS	
1. Schools shall report the number and percent of students passing the High School Competency Test (HSCT) on their first attempt.	no match
2. Schools shall report the number and percent of students scoring at each level on the Florida Writing Assessment.	no match
3. Schools shall report the number and percent of students scoring in each quartile of the Grade Ten Assessment Test.	no match
4. Schools shall report results on district norm-referenced test(s).	no match

Florida

	NCEO CODE
5. Schools shall report the number and percent of students passing upper level courses and advanced programs and the number and percent still enrolled. In the fall of 1995 school will report the number and percent of students moving from Level 1 to Level 2 to Level 3.	no match
6. Schools shall report the number and percent of students passing the HSCT by the end of their senior year.	no match
GOAL 4: LEARNING ENVIRONMENT School boards provide a learning environment conducive to teaching and learning.	
Standard 1: Schools provide a learning environment that enables students, teachers, and staff to successfully meet the standards and outcomes identified by this Commission.	no match
OUTCOMES	
1. Students, teachers, and staff exhibit a positive self-concept and demonstrate high expectations for behavior and achievement.	no match
2. Students, teachers, and staff demonstrate that they view their accomplishments as appropriately recognized and celebrated.	no match
3. Students, parents, teachers, staff, and other stakeholders demonstrate that they feel welcome, secure, and positive about the student's school environment and experiences.	H1, H2, H3
4. Students, teachers, and staff view their participation as important, as evidenced by their average daily attendance and participation.	A1a
5. Schools receive adequate resources and flexibility and demonstrate that their pupil/teacher ratio will ensure high quality teaching and learning and is appropriate to their school improvement plan.	no match
6. Schools receive adequate resource and maximum flexibility and demonstrate that they provide and maintain facilities, materials, equipment, technology, and programs that will ensure high quality teaching and learning and are appropriate to their school improvement plan.	no match
7. Schools exhibit that parents and other stakeholders are involved in classroom activities and participate in school programs.	B2b
GOAL 5: SCHOOL SAFETY AND ENVIRONMENT Communities provide an environment that is drug-free and protects students' health, safety, and civil rights.	
Standard 1: Schools provide an environment for students and staff that promotes good health and is free of violence, weapons, hazard, vandalism, and substance abuse.	no match
OUTCOMES	
1. A collaborative agreement exists among the school district and other stakeholders to keep the school campus free of disruptive influences, create a mechanism to enhance the environment in the community at large, and establish specific responsibility for maintaining a safe, healthy, and drug-free school environment.	no match
2. Schools collaborate with law enforcement and other stakeholders to ensure a safe school environment that is free of violence, weapons, vandalism, hazard, and substance abuse.	no match
3. Schools collaborate with social service agencies and other appropriate stakeholders to ensure all students participate in comprehensive health education program.	no match
4. Schools collaborate with environmental agencies and other appropriate stakeholders to ensure a safe school environment in all classrooms and laboratories.	no match
Standard 2: Local, state, and federal laws, rules and regulation related to health, safety, and civil rights are enforced. Schools ensure that students and staff are protected from and are not subjected to any and all forms of discrimination and harassment. All programs, activities, and services are inclusive and free of bias.	no match
OUTCOMES	
1. All appropriate stakeholders ensure the civil rights and safety of all members of the school.	no match

Florida

	NCEO CODE
2. Schools ensure equal opportunity for all staff and students to participate in all programs, activities, and services.	A2
3. Schools utilize bias-free assessment measures and instruments for appropriate student placement decisions.	no match
4. Schools develop and implement comprehensive written policies addressing any and all forms of harassment.	no match
5. Schools incorporate standard safety and health practices into the school and school bus environments.	no match
Standard 3: All students demonstrate personal responsibility for contributing to a school and school bus environment that is safe and free of tobacco, alcohol, and other drugs.	C2d, D1
OUTCOMES	
1. Students and other appropriate stakeholders collaborate to develop the Code of Student Conduct to ensure that their schools and school buses are safe and free of tobacco, alcohol, and other drugs.	no match
KEY DATA ELEMENTS	
1. Schools shall report the number and percent of incidents of violence, weapons, vandalism, substance abuse, and harassment. This information will be collected by the Department of Education in collaboration with other governmental agencies to address the incidence of violence in the schools.	no match
2. Schools shall report the number and percent of the student population enrolled in selected program areas (i.e., gifted, other exceptional education students, vocational education, dropout prevention, early childhood programs, ESOL programs, dual enrollment, advanced placement, and upper level math and science courses) by race, gender, and special population.	A1c
3. Schools shall report the number and percent of suspensions (in-school and out-of-school) and expulsions.	A1a, E1b
4. Schools and districts shall report the number and type of agreements with appropriate community agencies, such as law enforcement, health/social services, public libraries, or environmental protection, that will help establish and maintain an environment that is safe, free from health hazards, and free from drugs. The agreements may be negotiated at the school level or at the district level on behalf of the schools, and shall be approved by the school board (see "School Board Responsibilities for Development of Agency Agreements," page 6).	no match
5. Schools shall report information on hazardous conditions in and around school property.	no match

Idaho

Document Utilized

Implementing Performance Based Education: A handbook for School Districts (June,1994)

Background

Idaho has recently developed draft standards in 10 subjects: health education, fine arts, foreign languages, humanities, language arts, mathematics, physical education, science, social studies, and vocational and technical education. These frameworks describe student learning for grade K-4, 5-8, and 9-12. The frameworks will be voluntary and the state has yet to decide whether they will be tied to specific statewide assessments.

Idaho

STUDENT PERFORMANCE BENCHMARKS	NCEO CODE
EIGHTH GRADE STUDENTS	
1. An Idaho eighth grader communicates effectively in written, oral and multimedia forms (such as audio and video recorded presentations; charts, maps, graphs and visual aids; and computer enhanced presentations).	F1a, F3c, F5a
LIST OF TRAITS	
Ideas and Content. The communication is clear, focused, interesting, and appropriate for the audience. Details and anecdotes demonstrate a command of the subject.	F1
Organization. Communication is organized. The order, structure, and presentation are well organized and address issues in a clear and direct manner.	F1
Voice. The communication speaks appropriately and directly to the audience in a way that is individualistic, expressive and engaging.	F1a
Form. The communication conveys the intended message. Words, models, and symbols are used appropriately to enhance the presentation.	F1
Conventions. The communication includes appropriate use of grammar, capitalization, punctuation, usage, spelling and paragraphing.	F1a, F3c
2. An Idaho eighth grader locates, organizes and uses knowledge, information, and technology effectively.	F4, F5a
LIST OF TRAITS	
Reading. Written information is read with accuracy and understanding.	F3b
Active Listening. Verbal information is understood by the listener and appropriate feedback is given to the speaker.	F1
Identifications of Sources. Sources of knowledge and information are identified and used efficiently. Information technology is used appropriately.	F4, F5a
Organization of Information. Information is effectively organized using clear criteria to select material.	F4
3. An Idaho eighth grader identifies and describes problems or issues and develops effective strategies for addressing those concerns.	F2a
LIST OF TRAITS	
Presentation of Concerns. The problem or issue is clearly described, using figures, diagrams or models as appropriate.	F1

Idaho

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Development and Implementation Strategies. Clear and creative strategies, are selected, explored, implemented and evaluated.	F2a
Verification of Results. Results are related to prior knowledge and evaluated for reasonableness.	F2a
4. An Idaho eight grader demonstrates creativity and originality in the design, production, and presentation of activities.	F4
LIST OF TRAITS	
Creativity and Originality. Innovative methods in the design, production, and presentation of activities are explored and developed.	F4
5. An Idaho eighth grader critiques and evaluates the quality of work products and processes.	F2a
LIST OF TRAITS	
Group and Self-Evaluation. Individuals and groups are able to critique their own work and the work of others.	F2a, G2c
Identification of Strengths. Evidence of ability, talent, and knowledge are identified within the performance and related to previous performances.	G2b
Identification of Weaknesses. Areas for further improvement are identified and discussed.	G2c
6. An Idaho eighth grader demonstrates the ability and skills to work collaboratively.	G4b
LIST OF TRAITS	
Monitor Behavior. Personal behavior in group activities is monitored and consideration for individual differences is demonstrated.	G3a, G3b, G4b
Team Skills. Active listening and participation skills are used in group activities.	A2, F1, G4b
Provide Feedback. Constructive comments on cooperative work are given and received.	F1, G4b
Group Functioning. How the group does its work is assessed and managed, with conflict resolution skills used to solve problems.	F2a, G4b, G4c
Ethnic and Racial Differences. Learns to live in a changing society with mutual respect and appreciation for others.	G3a, G3b
7. An Idaho eighth grader demonstrates characteristics of an effective lifelong learner.	F
LIST OF TRAITS	
Vision. Goals and priorities are identified.	D3e
Self-esteem. A positive vision of self and others is developed. A positive desire to learn is demonstrated.	G2a, G3a
Initiative and Perseverance. The desire and ability to plan, implement, and conclude a project over time is demonstrated.	D3e
Responsibility. Responsibility for personal actions is demonstrated.	G1
Adaptability. Changes and challenges dealt with in a positive way. Plans and actions are modified appropriately in response to changing circumstances.	G1a
Skills of Strategic Learner. A variety of strategies for learning are explored and developed.	F4

Illinois

Document Utilized

An Overview of IGAP Performance Standards for Reading Mathematics, Writing, Science, Social Sciences (1993)

Background

The Illinois Academic Standards Project is currently developing academic standards in the fine arts, foreign languages, language arts, mathematics, physical development and health, science, and social sciences. The project is also identifying connections across subjects and incorporating the basic skills needed for employment and citizenship. These academic standards include both content standards and performance benchmarks. Standards describe student learning for grades K-3, 3-5, 5-8, 8-10, and 10-12. The standards will include benchmarks at grades 3, 5, 8, 10, and 12. The standards will be fully correlated with performance standards for the state assessment system.

Illinois

READING PERFORMANCE DEFINITIONS FOR GRADES 3, 6, 8, AND 10	NCES CODE
The state goal for reading requires that as a result of their schooling, students will be able to read, comprehend, interpret, evaluate, and use written material. To assess this goal, the reader attributes presented below assume that the reading and thinking process that students use varies little across grades. Successful, facile readers at all levels must be able to predict, make inferences, evaluate information, interpret, and apply information that they have read.	F2a, F3b
Level 1: Level 1 students may not be able to read material that is appropriate to their grade. Particularly at the upper grades, they do not think of themselves as readers and often fail to value reading for personal purposes. As a result, they may exhibit aberrant response patterns on tests or give up. They often respond negatively to items about reading habits, attitudes and dispositions. In some cases, **grade 3 and 6, level 1** students display positive attitudes toward reading but they have not progressed in ability to a level 2 reader year.	
Attribute: They can process explicitly stated information inconsistently. Indicator: They often, but not always, identify specific details as answers to text-based questions. Attribute: They fail to exhibit balance between text and personal knowledge: They over-rely on specific pieces of information. Indicator: They are easily misled by distractions that contain important but irrelevant words from the text. Attribute: They fail to exhibit balanced text and personal knowledge: They over-rely on prior knowledge. Indicator: They are easily misled by distractions that are not applicable to this particular questions although possibly applicable in everyday experience.	
Level 2: Level 2 students are able to read material appropriate to their grade. They have the motivation, skill, and strategies to persist in completing reading tasks. They think of themselves as readers and engage in some voluntary reading. They respond positively to some questions about reading habits, attitudes, and dispositions.	
Attribute: They can reliably process explicitly stated information in the text. Indicator: They respond accurately to most text-explicit terms.	

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Attribute: They use their personal knowledge to interpret and construct meaning.
Indicator: They respond accurately to some items that focus on interpretation.
Attribute: Knowledge of text and genre (**Grade 3**): They approach the texts as a meaningful unit and recognize that attending to the author's structure, particularly in stories, aids comprehension and recall.
Indicator: They respond more accurately to text-based statements of main ideas, summaries, and themes about narrative texts than to similar questions about expository texts.
Attribute: Knowledge of text and genre (**Grades 6, 8, and 10**): They approach the text as a meaningful unit and recognize that attending to the author's structure aids comprehension and recall in both narrative and expository texts.
Indicator: They respond with similar degrees of accuracy to text-based statements of main ideas, summaries, and themes about narrative and expository texts.
Attribute: When directed to do so, they can retain information to summarize and synthesize.
Indicator: They respond with a moderate degree of accuracy to main ideas, summaries, and themes that are fairly close to the text.

Level 3: In addition to the attributes of the level 2 reader, students who operate at level 3 easily read grade-level text and make appropriate connections and associations. They demonstrate high levels of success on a variety of items. They think of themselves as able readers and value reading as a personally rewarding voluntary activity. They respond positively to reading survey items measuring habits, attitudes, and dispositions.

Attribute: They read interactively and adaptively, approaching text from their own perspective and/or the author's, as appropriate.
Indicator: They show similar patterns of success on measures of narrative and expository comprehension.
Attribute: They balance and assess the place and importance of ideas from the text and personal knowledge to construct and revise meaning.
Indicator: They demonstrate high levels of success on a variety of items.
Attribute: They consistently and continuously summarize, integrate, and synthesize ideas within and across texts.
Indicator: They respond accurately to items that assess main ideas, summaries, and themes regardless of whether they are restatements or more abstract elaborations of ideas from the text.
Attribute: They monitor their reading and adapt their reading strategies to their purpose, their personal knowledge, and the demands of the text.
Indicator: They respond accurately to a variety of constructing meaning items as well as reading strategies items.
Attribute: They are familiar with and sensitive to different genres (e.g., narrative and expository).
Indicator: They show comparable patterns of success on both narrative and expository texts.
Attribute: Literary devices (grades 3 and 6): They are familiar with and can understand texts that exhibit the application of rudimentary literary devices such as figurative language and point of view.
Indicator: They respond accurately to items assessing their awareness of these literary devices
Attribute: Literary devices (Grades 8 and 10): They are familiar with, can understand and can evaluate the use of a range of literary devices such as iron, satire, figurative language and point of view.
Indicator: They respond accurately to items assessing both their awareness of and the intended effect of these literary devices.
Attribute: They can recognize multiple perspective, motivations, and interpretations.
Indicator: They select more than one correct alternative even when alternatives represent different ways of reasoning.
Attribute: They can apply information and/or insights to new situations, problems, or texts.
Indicator: They respond accurately to transfer and application.

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MATHEMATICS PERFORMANCE DEFINITIONS FOR GRADES 3, 6, 8, AND 10	NCEO CODE
Mathematics definitions incorporate the seven state goals for learning in mathematics and elements of the goals for mathematical literacy established by the National Council of Teachers of Mathematics. The definitions describe students who can solve problems, communicate, reason, and make connections within and across the broad content areas of mathematics using currently available technology. The seven goals for learning mathematics are:	F2a, F3a, F5a
1. Number Concepts and Skills This goal includes the ability to model, read, write, compute, and reason with numbers in a variety of settings. The ability to add, subtract, multiply, and divide, using whole numbers, integers, fractions, and decimals reflects this goal.	F3a
2. Percent, Ratio and Proportion. This goal includes the ability to understand and use ratios, proportions, and percentages for comparing and analyzing quantitative relationships.	F2a, F3a
3. Measurement This goal includes the ability to relate measurement and systems of measurement to common situations including measuring area and volume.	F3a
4. Algebraic Concepts and Skills This goal includes the ability to identify, analyze, and solve problems using variables, equations, inequalities, functions, and their graphs.	F2a, F3a
5. Geometric Concepts This goal includes the ability to understand and apply geometric concepts and relationships in a variety of forms.	F3a
6. Data Collection and Analysis This goal includes the ability to understand and use methods of data collection and analysis, including tables, charts, and comparisons. It also includes the ability to make predictions based on experiments or calculated probabilities.	F2a, F3a
7. Estimation/Approximation This goal includes the ability to use mathematics skills to estimate, approximate, or predict outcomes and to judge the reasonableness or results.	F2a, F3a
Grade 8, Level 1: Level 1 students are able to identify and use the correct fundamental operation for one- and two-step problems that involve whole numbers of decimals. They can deal with practical mathematical situations that arise from the students' own experience. These students understand place value and order of operations, and they have some understanding of basic operations with simple fractions that have common or easily related denominators. They can express simple common ratios but lack the ability to construct related proportions. These students are able to determine the reasonableness of given estimates and some solutions to numerical problems.	
Level 1 students can make conversions between units of length within either the customary or metric system. They know and are able to apply formulas for perimeters and areas of simple geometric figures and can extend the use of these formulas to rectangular three-dimensional settings. They can identify, compare, and contrast the basic attributes of common two- and three-dimensional objects and similar figures.	
These students can translate and solve one-step equations that involve the four basic operations and can evaluate formulas and expressions that apply these four operations to whole numbers. These students also can plot ordered pairs of integers on a coordinate plane. Level 1 students are capable of organizing, interpreting, and analyzing data from personal or provided surveys, tables, or graphs. They can perform simple experiments in probability and describe the results.	

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Overall, students show little readiness for the study of algebra because they do not consistently demonstrate the requisite problem-solving, reasoning, and representational skills. Furthermore, they have little command of the calculator beyond performing simple numerical operations. These limited abilities are characterized by an inability to perform even the content presented in the classroom. **Grade 8, Level 2:** Level 2 students are able to solve practical problems that involve integers, decimals, fractions, percents, and proportions with or without a calculator. They also understand variables and solve equations using one variable. These students can establish ratios and relate them to proportions in common problem settings with which they are familiar. Their grasp of percentages allows them to handle simple situations that involve each type of percent usage such as determining interest, sales tax, or commissions. Level 2 students can make conversion between units of mass and capacity within a measurement system and calculate the surface area and volume of standard rectangular solids and spheres. They can draw illustrations for common geometric relationships and apply relationships that involve lines and angles in a variety of settings. Level 2 students can solve simple equations or one-step equations that have integral solutions. They can also evaluate algebraic expressions using order of operations and implied multiplication procedures. Level 2 students can evaluate formulas and expressions that involve exponents with and without a calculator. They can graph a given line with integral coefficients on a coordinate plane. These students predict solutions to equations and numerical problems using estimation, rounding, or mental mathematics to determine their response. In statistical settings, level 2 students can generalize from data to predict possible trends. They exhibit a basic understanding of relative frequency probability involving common objects or games. Overall, level 2 students have solid grasp of the core curriculum at grade 8, including problem solving strategies, reasoning, and communication skills. They tend to be bound by the materials they have seen but are able to extend their reasoning through the use of calculators and computer utilities. They are developing their abilities to interpret and generalize from graphical representations. They are on the path to the study of algebra. **Grade 8, Level 3:** Level 3 students are able to solve a wide variety of practical problems involving percents, proportions, and exponents. They have a solid conceptual understanding of the interrelationships among fractions, decimals, and percents, and their connections with proportions. They can apply these skills in combinations with estimation and rounding to predict reasonable solutions to multi-step, complex problems. Level 3 students can apply formulas and conversions of measurements in nonroutine settings. They can apply properties of triangles including similar and congruent figures and the Pythagorean theorem in familiar settings. Level 3 students are able to translate and solve multi-step equations involving rational numbers. They can evaluate formulas and expressions involving the four fundamental operations with fractions, decimals, and integers. They are also capable of graphing inequalities on a number line or a plane. These students have also developed an intuitive appreciation for the interpretation of the slope of a line. These students are capable of reading and interpreting complex statistical graphs, charts, and tables. In addition, they are capable of calculating probabilities by constructing a sample space and identifying favorable outcomes for somewhat difficult but elementary problems. Overall, Level 3 students have a very broad understanding of the problem-solving, reasoning, and communication skills expected of students at this stage of learning. They have considerable algebraic skills and are ready for the study of algebra if they are not already engaged in it. They can use scientific calculators productively both to carry out calculations and to explore the nature of numerical patterns and data sets. Their work is characterized by consistently correct and insightful performance.	

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WRITING PERFORMANCE DEFINITIONS FOR GRADES 3, 6, 8, AND 10	NCEO CODE
The state goal for writing states that as a result of their schooling, students will be able to write standard English in a grammatical, well-organized and coherent manner for a variety of purposes. To ascertain whether students meet the state goal for writing, IGAP assesses students' abilities to write for three broad purposes:	
Persuasive There are two types of assignments: The position paper in which students take a position and develop one side of an argument or the problem/solution paper in which students develop both a problem and a solution.	F3c
Expository Students are asked to explain, interpret, or describe something based upon background experiences or information provided in the prompt. These assignments differ from the narrative in that the writer does not include personal reactions or feelings in describing or presenting information.	F3c
Narrative There are two types of assignments: The paper in which students recount and reflect upon a personally significant experience of the paper in which students report and record reactions to an observed event. For assignments in which students share or recount personal experiences, they are expected to describe the action and their reactions. In reports of observed events, students also narrate an event and describe the reactions of participants.	F3c
All of the writing assignments tap students' abilities to write about background experience and general academic content. Both sources of knowledge form the basis of students' understanding and interpretation. Students are not expected to have specific knowledge of content area in order to respond to the state assessment prompt. The paper is not evaluated on the basis of wrong or right answers but rather the credibility and logic of the support and elaboration in regard to the assignment. Furthermore, the assessment calls upon a range of higher-order thinking skills including comparison, interpretation, and evaluation.	
The writing features that raters use to score essays are defined as follows: **Integration:** Evaluation of the essay based on a judgement of how effectively the composition as a whole uses the basic features to address the assignment. **Focus:** The clarity with which a composition presents a clear main idea, point of view, theme, or unifying event. **Support/Elaboration:** The degree to which the main point or event is elaborated and explained by specific details and reasons. **Organization:** The clarity and/or coherence of the logical flow of ideas and the explicitness of the text structure or plan. **Conventions:** The use of standard written English.	
Grade 8, Level 1: The students at the top of this level may be able to write a basic form paper which is simple, informative, and clear, presenting nothing more than essentials but perhaps missing one of the required features. The students at the lowest end of the spectrum produce papers with only the rudiments of techniques for forming focus, organization, and support, or they may not have sufficient writing to show that criteria are met. Some level 1 students have few convention errors and a master of sentence construction while others at this level make numerous errors which interfere with communication.	
Grade 8, Level 2: The students at this level write basically developed papers in which the features are all present. Some features such as focus may be more developed but, for the most part, the paper is simple, informative, and clear, presenting few things more than the essentials. Level 2 students show sufficient evidence of mastery of sentence construction with few errors depending on the length of the paper and the writing conditions.	
Grade 8, Level 3: The students at this level write well-formed papers in which all the features are present and well-developed but not all features may be equally well-developed throughout the paper. Level 3 students show sufficient evidence of mastery of sentence construction with only a few errors depending on the length of the paper and the writing conditions.	

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SCIENCE PERFORMANCE DEFINITIONS FOR GRADES 4, 7, AND 11	NCEO CODE
The four goals in science comprise the science performance definitions. As a result of their school, students will have a working knowledge of:	
Goal 1: The concepts and basic vocabulary of biological, physical, and environmental sciences and their application to life and work in contemporary technological society.	F4a
Goal 2: The social and environmental implication and limitations of technological development.	F4a
Goal 3: The principles of scientific research and their application in simple research projects.	F4a
Goal 4: The processes, techniques, methods, equipment, and available technology of science.	F4a, F5a
Science, in its quest for objective truth, provides a conceptual framework for the understanding of natural phenomena and their causes and effects. The purpose of establishing a performance definitions is to provide guidelines for the development of students who understand and use that framework productively and creatively. Scientifically knowledgeable students understand the basic concepts and principles of science; recognize the reciprocal relationships among science, technology, and society; know the difference between objective fact and subjective value; understand the logic of experimental design; and use scientific instruments, units, and safety practices appropriately. Most importantly, they can apply their knowledge and skills in problem-solving and decision-making. In doing so, science students reason critically; evaluate hypotheses empirically; reach evidence-based decisions logically; and communicate results clearly, honestly and openly. In broad terms:	
Level 1: Describes students who do not meet the state goals for science. They may recognize, but do not fully understand, the fundamental content or processes of science appropriate for their age. This is to say they may know the "what" with respect to the content and processes of science but do not understand "why," (i.e., do not grasp the reasons or principles which govern them). They view science as static, comprising only facts or recipes. Their conclusions are often guided more by preconception than by empirical evidence.	
Level 2: Describes students who meet the state goals for science. They have clearly mastered the fundamental content and processes of science appropriate for their age. What distinguishes them from level 1 students is that they also have begun to understand the principles and laws which govern relationships among concepts and processes (i.e., "why"). They understand them, however, only in the context in which they are learned. They begin to view science as dynamic but are seldom able to apply their knowledge and skills to novel or unfamiliar topics. They attempt to ground their conclusions in empirical information.	
Level 3: Describes students who exceed the state goals for science. What distinguishes them from the level 1 and level 2 students is that they also can use science concepts and principles to pose and solve problems. Further, they identify similarities of relationships among phenomena and know how to extend their knowledge and skills to new problems independently and creatively. They base their predictions and conclusions on available information and view science as dynamic, useful, and applicable to everyday life.	
GRADE 7: GOAL 1	
Level 1: Students may recognize scientific concepts in the physical, biological, and earth sciences such as motion (velocity) 3; force (magnets, electricity, gravity); evolution (natural selection); patterns of physical, chemical, and biological changes (cycles, states of matter, reproduction); and forces that shape Earth (water, wind, volcanoes, earthquakes). However, they do not understand these concepts as parts of systems, models, or principles. They tend to know "what" (i.e., they can sometimes describe phenomena and label them correctly) but not "why" (i.e., the principles that govern them). They do not consistently demonstrate mastery of fundamental concepts (work/power, prey/predator, density/volume); laws (gravity)	

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and principles of science (conservation, cause/effect, function/structure). They do not grasp mathematical relationships among variables, especially in inverse relationships. They seldom integrate discrete facts into broader concepts and therefore, do not extend their understanding across a variety of contexts appropriately. **Level 2:** Students show increasingly clear, reasonable, and consistent understanding of science concepts such as those cited above. They recognize that these concepts are components of models (mental, physical, mathematical), systems (solar, circulatory, nervous), and the principles which govern them. They can apply models or principles to simple problems but often must have mental connections drawn for them. They seldom extend their knowledge beyond immediate topics. For example, they may understand the principle which governs the angles of incidents and reflection of light shining on a mirror but do not independently extend that principle to basketballs, marbles, or pingpong balls. **Level 3:** Students not only understand concrete instances of the major concepts but also make connections among related concepts, models, and systems. They are able to transfer and apply scientific concepts and principles to novel situations. For example, they are likely to understand the connections between the angle at which a basketball bounces from a backboard and the angles of incidence and reflection of light.	
GRADE 7: GOAL 2 **Level 1:** Students may recognize selected social and environmental implications of technology. Although they may identify some societal impacts of technology, they do not understand their economic or political implications broadly or consistently. For example, they may recognize a relationship between the use of natural resources and the generation of waste but cannot explain why or how they are related. Their interpretations and decisions tend to be based on short-term concerns, and they do not grasp the reciprocal relationships among science, technology, and society. **Level 2:** Students have a broader sense of the role of science and technology and its impact on society. They are aware of the political and economic impact of science and technology on the larger community. They generally understand that science and technology impact contemporary social, environmental, health, and ethical issues (biodegradable materials, genetic testing, pollution, medical treatment, energy resources). They can evaluate the pros and cons of simple issues using empirical data and scientific principles. As well, they often make informed consumer decisions. **Level 3:** Students recognize the implications of selected scientific and technological discoveries on the quality of human and animal life. They may express concern about technological issues (water, food, and energy supplies; oil spills; acid rain; agricultural practices), seek informed solutions, and offer them to those in authority. They understand the global impact of societal attitudes and practices and may try to alter them locally. They often identify the scientific knowledge required for the development of specific technologies (the relationship of germ theory of communicable disease to prevention by vaccines, sanitation, or isolation).	
GRADE 7: GOAL 3 **Level 1:** Students may recognize the ethical practices of science but apply them inconsistently. Their concern with getting the "correct" answer tempts them to change the data collected to match classmates' results or expected outcomes. They often change predictions to match data ex post facto. They can identify variables but confuse independent and dependent variables. Their knowledge of the logic of experimental designs is essentially limited to following directions. They tend to rely on social authorities for "correct" answers and may believe that scientific explanations cannot be questioned or changed. **Level 2:** Students understand the basic ethical principles of science and the reasons for them and are often willing to accept discrepancies between predictions and experimental outcomes. They can design and conduct a simple experiment yet sometimes have difficulty correctly identifying independent and dependent variables. They recognize that scientific explanations	

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are tentative and, in the face of new evidence, subject to change. They know the difference between a statement of fact and a value judgement (opinion) and show increasing knowledge of valid versus invalid sources of information.	
Level 3: Students, in addition to the skills cited above, can pose simple researchable problems, state hypotheses, identify and control key variables, and conduct simple experiments. They communicate their procedures so that others can replicate them to verify their results. They recognize that science is a creative enterprise and that there may be more than one way to attack a problem effectively.	
GRADE 7: GOAL 4	
Level 1: Students are often unfamiliar with specific scientific equipment, metric units of measurement, and techniques. For example, they may have trouble measuring with a graduated cylinder or balance and are sometimes unconcerned with laboratory safety rules. They often interpret and communicate the results of an activity or experiment by giving limited or literal accounts. They can collect data and graph them if specific guidance is given. However, their ability to interpret a graph and apply its meaning to other contexts is absent. They often make predictions or draw conclusions that are not grounded in available information.	
Level 2: Students, with guidance, use the equipment necessary to collect data safely and adequately. They can usually interpret and communicate the results of their experiments through the use of graphs or diagrams but may need some guidance in communicating results and procedures orally and in writing. They usually make meaningful predictions or draw conclusions based on available information.	
Level 3: Students can turn data into information and information into conclusions and convey them clearly. Specifically, they use science equipment, tools, laboratory safety procedures independently. They can organize and use data to make generalizations and interpretations and can communicate procedures and results orally and in writing. They make meaningful predictions consistently and draw conclusions based on available information. They are familiar with the metric system, scales, models, and computers as scientific tools.	
SOCIAL SCIENCE PERFORMANCE DEFINITIONS FOR GRADES 4, 7, 11	
The five state goals for the social sciences provide students with an understanding of themselves and of society, prepare them for citizenship in a democracy, and offer them a foundation for understanding the complexities of the world community. As a result of their schooling, students will be able to:	
Goal 1: Understand and analyze comparative political and economic systems with an emphasis on the political and economic systems of the United States;	F2a, F4a
Goal 2: Understand and analyze events, trends, personalities, and movements shaping the history of the world, the United States, and Illinois;	F2a, F4a
Goal 3: Demonstrate a knowledge of the basic concepts of the social sciences and how these help to interpret human behavior;	F4a
Goal 4: Demonstrate a knowledge of world geography with an emphasis on the United States; and	F4a
Goal 5: Apply the skills and knowledge gained in the social sciences to decision-making in life situations.	F2a, F4a
These goals extend beyond history and geography to encompass economics, governments, and the behavioral sciences. In addition, they address the application of this knowledge and skill in decision-making. The study of the social sciences requires students to recall relevant content; to interpret maps, charts, graphs, and cartoons; to distinguish fact from opinion and relevant from irrelevant information; to solve problems systematically; and to access information. Therefore, the extent to which students are able to show these skills	

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provides the framework for distinguishing among students at each of the three performance levels.

As well as specifically addressing the five goals, these definitions build upon the work of various organizations such as the national council of the Social Studies, National Council for History Education, and the National Council for Geographic Education. They also build upon the efforts of the National Assessment of Educational Progress in the areas of history and geography education.

Grade 7, Level 1: Level 1 students have an inconsistent mastery of data, concepts, and skills. They can identify some historic and contemporary leaders, events, and issues. However, their knowledge base is narrow and incomplete. Their use of such basic tools as maps, globes, and reference works is limited as are their analytical and thinking skills. Their knowledge of U.S. history may be confined to holidays and heroes. Their ability to describe significant events or persons; relate fundamental trends, themes, or ideas; or outline any substantive chronology is minimal. For example, these students may know that both the Civil War and the Civil Rights Movement occurred. However, they are unable to make any fundamental connection other than both involved African-Americans.

Level 1 students also have limited awareness of current events and limited mastery of the social sciences of geography, economics, government, sociology, and psychology. These students relate to concepts with which they have had direct experience. For example, the level 1 students who has visited the Rocky Mountains believes that all mountains are made of sharp, angular rocks with limited vegetation near the top.

These students can make connections across time and space only with substantial guidance. Thus, they often cannot demonstrate such skills during traditional testing situations. Level 1 students can manage only simple problem-solving situations—narrowly focused, needed information readily at hand—and the problem-solving structure often must be provided. In this area, the students' skills may be very elementary. Thus, out-of-class reports are generally copied verbatim from the encyclopedia or other reference work.

Grade 7, Level 2: Students who operate at level 2 have benefited from systematic instruction in history, geography, government, and to a lesser extend, economics and the other social sciences. Thus, they can identify and place in context a range of historically significant people, events, and issues. They are familiar with the concepts and generalizations of geography and government. They exhibit some skill in using the analytical tools of social science disciplines. They also can apply their knowledge from these areas of study across time and space.

Drawing upon a variety of content, these students are able to demonstrate an understanding of such fundamental concepts as diversity, change, environmental and cultural heritage, democracy, freedom, and the fundamental rights and responsibilities of citizenship. Although perfection is not expected, level 2 students demonstrate a consistent pattern of performance that shows mastery.

Level 2 students' skills include the use of maps and globes; interpretation of tables or graphs; identification of part-whole, cause-effect, fact-opinion, and relevant-irrelevant relationships; and resolution of problems with multiple solutions. They are able to relate fundamental trends, themes, and ideas; use a variety of research tools effectively; and understand current events.

Grade 7, Level 3: Students who function at level 3 differ from their cohorts in degree more than in kind. Across the five goals, level 3 students demonstrate greater consistency in the recall of information, interpretation and analysis of data, solution of problems, and acquisition of information from a variety of resources. Their knowledge base is broad and deep. They can pursue multi-step procedures using tools and concepts from the social sciences.

Illinois

	NCEO CODE
They also can use historical, geographic, or social science themes to organize topics and to incorporate information from outside the classroom into their understanding of the subject. Such students can make connections across time and space. They may see parallels between ethnic strife in eastern Europe over territory and turf battles among urban street gangs. Further, they can compare the conflicts involved in building democracies in the former Soviet Union and some of the same struggles the American colonies encountered 200 years ago.	

Indiana

Documents Utilized

Special Education Program Improvement Manual (January, 1990)
Indiana Educator: A Guide to Indiana's Comprehensive Assessment System (Spring 1994)

Background

In July 1993, the State Board of Education adopted Essential Skills Content Standards in mathematics and language arts for grades 3, 4, 8, 10, and 12. These standards represent what students are expected to know, and they form the basis of statewide assessments. The Essential Skills Content Standards were developed by thousands of educators in Indiana. The 1990 Special Education Improvement Manual specified Indiana's Effectiveness Indicators for Special Education, a list of indicators for program success that relates to 10 areas of programming.

Indiana

PROGRAM AND STUDENT OUTCOMES		NCEO CODE
	An effective educational program ensures the development of academic, vocational, and social competencies commensurate with each student's potential and fosters a high sense of satisfaction in the individuals who are major stakeholders in the process (students, parents, teachers, administrators, district staff, school board, and community). Students with handicaps need to be satisfied with the educational services they have received and feel that the total program has met their needs by preparing them to function as productive citizens in their community. Other stakeholders need to be confident that school programs will lead to successful achievement and positive benefits for all students. (Note: Priority indicators are marked with an asterisk.)	
PROGRAM HEADINGS AND PERFORMANCE INDICATORS.		
10.1	**STUDENT PERFORMANCE**	
10.1.1	Attendance, graduation, dropout, and suspension rates of students with handicaps compare favorably with rates of regular education students.	A1a, E1b
10.1.3	Non and limited English proficient students with handicaps progress at a satisfactory rate in their special education and regular education programs.	F
10.1.4	Students with handicaps develop academic competencies:*	F
10.1.4.1	Commensurate with their abilities, they develop competencies in appropriate academic curriculum areas such as reading, language arts, mathematics, science, social studies, cultural arts, and technology; and	F3a, F3b, F3c, F4a, F4b, F5a
10.1.4.2	They achieve or go beyond their individualized educational program (IEP) goals and objectives in academic areas.	F3d
10.1.5	Students with handicaps develop vocational competencies commensurate with abilities and interests.*	F
10.1.5.1	They acquire job preparation and vocational skills.	F
10.1.5.2	They demonstrate pre-employment competencies such as:	
10.1.5.2.1	Ability to identify career or vocational interest.	A2f
10.1.5.2.2	Knowledge of selected career and requisite skills and attributes.	A2f
10.1.5.2.3	Ability to identify training and employment options and opportunities, and ability to seek employment or further education or training.	A2f

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10.1.5.3	As appropriate, students develop job-specific skills including knowledge and skills normally required to carry out entry-level tasks of a specific occupation or cluster of occupations; and	no match
10.1.5.4	Students develop work maturity skills, including those skills needed to obtain and retain a job.*	no match
10.1.6	Students with handicaps develop positive behaviors and attitudes including:	D, G
10.1.6.1	Positive self-concepts,*	G2a
10.1.6.2	Positive attitudes toward others,*	G3a, G4
10.1.6.3	Productive work and study habits, and	F
10.1.6.4	Effective social skills.	G
10.1.7	Students with handicaps develop and express creative interests and talents.	no match
10.1.8	Students with handicaps develop self-help and independent living skills in such areas as:*	D3
10.1.8.1	Applying problem-solving and decision-making skills;*	F2a
10.1.8.2	Communicating needs and feelings effectively;	F1a, G1b
10.1.8.3	Knowing about essential aids and equipment and how to acquire them;	B1
10.1.8.4	Knowing about benefit programs and financial assistance opportunities and how to acquire them;	B1e
10.1.8.5	Understanding affirmative action, fair employment, and other anti-discrimination guarantees that affect them;	B1
10.1.8.6	Advocating for legal, personal or consumer rights;	B1, D3d
10.1.8.7	Negotiating confidently with agencies or individuals to acquire essential benefits and services;	B1, B1e
10.1.8.8	Understanding how earned and unearned income affects benefits eligibility;	B1e
10.1.8.9	Knowing about and understanding how to acquire personal care assistance to live independently,*	B1d, B1e
10.1.8.10	Knowing about housing options and understanding how to acquire them;	B1e
10.1.8.11	Applying the principles of accessibility to homes;	B1a
10.1.8.12	Knowing about transportation options and how to acquire/use them; and	B1a
10.1.8.13	Being comfortable in social situations and using leisure time productively.	G4
10.2	**STAKEHOLDERS SATISFACTION**	
10.2.1	**Student Satisfaction**	
10.2.1.1	Students with handicaps are satisfied with the educational services they have received and feel that the special education, regular education, and vocational education programs have met their needs.*	H1b
10.2.1.2	Students with handicaps are satisfied with their progress in school.	H1a
10.2.1.3	Students with handicaps are satisfied with the way they have been treated in school by faculty, staff, and other students and with their level of integration with nonhandicapped peers.	H1b
10.2.2	**Parents**	
10.2.2.1	Parents of children with handicaps are satisfied with:*	H2
10.2.2.1.1	The special education program, procedures, and services provided for their children and with their children's progress;	H2a, H2b
10.2.2.1.2	Their level of participation and involvement;	H2
10.2.2.1.3	The way their child is treated at school by faculty, staff, and other students; and	H2b
10.2.2.1.4	Their child's integration with nonhandicapped students.	H2b
10.2.3	**School Staff Satisfaction**	
10.2.3.1	Staff members express a sense of challenge and satisfaction in their professional	H3

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	roles and feel they make a difference as a result of involvement in decision-making.	
10.2.3.2	Staff are satisfied with the inclusion of students with handicaps within the regular education programs and have positive attitudes toward special education.	H3b
10.2.3.3	Staff are satisfied with the special education program and services in such areas as policies and procedures, instructional delivery and results, and in-service training.	H3b
10.2.4	Employers' Satisfaction	
10.2.4.1	Employers express willingness to employ students/graduates with handicaps and are satisfied with the performance of these students and graduates.*	H3a
10.2.5	School Board and Community	
10.2.5.1	The school board indicates support for the special education program through the allocation of necessary resources.	no match
10.2.5.2	Students with handicaps are viewed positively and treated well in the community.*	no match
10.2.5.3	Parent and nonparent taxpayers indicate satisfaction with, and demonstrate support for, the special education program.	H2b, H3b
10.2.5.4	Community leaders and business persons indicate support for the special education program through donations or contributions, employment of graduates, and support of special activities.	no match
LANGUAGE ARTS		
1.	Use language, both oral and written, while working with others to learn and solve problems.	F1a, F2a, F3c, G4b
1.1	Use resources for acquiring information an d conducting research of personal significance.	F4, F4a
1.2	Reflect on and discuss new ideas.	A2a, F1, F4a
1.3	Initiate and participate in conversations and discussions.	A2a, F4a, F4b
1.4	Participate in literary and dramatic activities.	F4b
1.5	Read many works by a "favorite" author.	F3b, F4b
1.6	Improve writing based on peer and teacher response.	F3c, F4a
2.	Communicate clearly using oral language and listen effectively.	F1, F1a, F4a
2.1	Summarize ideas and acknowledge different points of view.	F1, F4a
2.2	Give accurate information.	F1a, F4a
2.3	Paraphrase what others have said.	F1a, F4a
2.4	Participate regularly in formal and informal speaking situations.	A2, F1, F4a
3.	Read for understanding.	F3b
3.1	Make connections to prior reading.	F4a
3.2	Critically examine reading materials.	F2a, F3b, F4a
3.3	Follow directions on forms and products.	F3v, F4a
3.4	Comprehend magazines and newspapers.	F3b, F4a
3.5	Comprehend a broad variety of literature including adolescent novels.	F3b, F4a
3.6	Read for uninterrupted periods of time.	F3b, F4a
3.7	Comprehend electronic media such as computer text.	F3b, F4a, F5a
4.	Select and use appropriate strategies for writing.	F3c, F4a
4.1	Revise content as appropriate for audience and purpose.	F3c, F4a
4.2	Edit and proofread for usage, mechanics, and spelling.	F3c, F4a
4.3	Use dictionaries and handbooks for revising and editing.	F3c, F4a
4.4	Use the prewriting process (prewriting, drafting, peer sharing, revising, and editing) to produce final products.	F3c, F4a
4.5	Produce final products that communicate effectively with readers and follow accepted conventions (grammar, usage, mechanics) of written language.	F1, F3c, F4a

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		NCEO CODE
4.6	Write for different purposes and audiences to produce: personal and informational essays; reflective pieces; business letters; simple directions and completed business forms.	F3c, F4a
4.7	Synthesize information from at least one source.	F3c, F4a
5.	Use prior knowledge and content area information to reason, apply concepts, and make critical judgements.	F2a, F4a
5.1	Distinguish between fictional and nonfictional accounts.	F3b, F4a, F4b
5.2	Identify author's/writer's purpose and perspective.	F3b, F4a
5.3	Distinguish between relevant and irrelevant information.	F3b, F4a
5.4	Compare and contrast.	F2a, F3b, F4a
5.5	Discuss relationships between form and content.	F1, F4a
5.6	Discuss relationships between literary works and other art forms.	F4b
5.7	Identify features of common literary genres.	F4b
5.8	Understand the functions of common literary conventions.	F4b
MATHEMATICS		
1.	Develop strategies for solving problems through translating data into mathematical language.	F2a, F3a
1.1	Continue to solve problems by strategies, such as making a list, drawing a picture, and looking for a pattern.	F2a, F3a
1.2	Solve problems that require interpreting a diagram or drawing, using logical reasoning, and using guess and check.	F2a, F3a
1.3	Solve a simpler problem to suggest a solution to a more complex one.	F2a, F3a
1.4	Solve word problems involving application of percent, such as interest, discount, sales tax, etc. Solve word problems involving application of ratio and proportion.	F2a, F3a
1.5	Solve problems involving two or more operations.	F2a, F3a
1.6	Explain the thought process in solving routine and non-routine problems.	F1, F2a, F3a
2.	Develop and practice effective communication using the language of mathematics.	F1, F3a
2.1	Explain the thought process in writing or orally when given a problem-solving situation.	F1a, F2a, F3a, F3c
2.2	Explain and justify the solution to a given problem in a variety of settings such as cooperative learning.	F1a, F3a, G4b
2.3	Make and validate conjectures about possible relationships.	F2a, F3a
3.	Develop reasoning skills and apply them to problem-solving situations.	F2a, F3a
3.1	Given a three-dimensional model or pictorial representation, identify the object from a different view.	F2a, F3a
3.2	Given a pictorial representation of a three-dimensional object, reproduce the object using appropriate manipulatives.	F2a, F3a
3.3	Given a problem-solving situation involving three-dimensional space, draw an appropriate diagram to aid in the solution of the problem.	F2a, F3a
3.4	Given a problem-solving situation, identify one or more strategies for solving the problem.	F2a, F3a
4.	Recognize and make connections.	F2a, F3a
4.1	Recognize relationships and patterns within the set of rational numbers.	F2a, F3a
4.2	Recognize that mathematical topics, such as measurement, statistics, and problem-solving have implications fro social studies, science, home economics, and other disciplines.	F2a, F3a
4.3	Investigate and recognize the role of mathematics in our society.	F2a, F3a
4.4	Use geometric concepts and terminology, such as similarity, to describe phenomenon in nature, art, and other events.	F2a, F3a
5.	Reinforce an understanding of the place-value system for whole numbers and decimals.	F3a
5.1	Express a whole number in exponential form.	F3a

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5.2	Order a set of whole numbers and decimals sequentially.	F3a
5.3	Determine the equivalent of a fraction and conversely given a set of whole numbers and fractions.	F3a
6.	Reinforce an understanding of fractions, and develop an understanding of percent, integers, and irrationals.	F3a
6.1	Determine the prime factorization of a whole number less than 100.	F3a
6.2	Express a fraction as a decimal.	F3a
6.3	Explore the relationships between fractions, decimals, and percents.	F3a
7.	Develop computational proficiency within the set of real numbers.	F3a
7.1	Given a problem involving adding, subtracting, multiplying, or dividing two fractions with like or unlike denominators, solve the problem with or without regrouping.	F3a
7.2	Use estimation to predict the results of a problem involving the four fundamental operations.	F3a
8.	Develop estimating skills with whole numbers, fractions, and decimals with application to measurement, geometry, and problem-solving.	F2a, F3a
8.1	Estimate the results of a problem involving the four operations of whole numbers.	F2a, F3a
8.2	Estimate the sum or difference of a problem involving addition or subtraction of decimals and fractions.	F2a, F3a
8.3	Given a problem-solving situation, make an appropriate estimate relating size, quantity, temperature, capacity, and passage of time.	F2a, F3a
9.	Develop an understanding of geometric terms and concepts and apply those concepts in problem-solving activities.	F2a, F3a
9.1	Identify the properties of a plane or solid figure.	F3a
9.2	Given a set of plane figures and their attributes, identify those that are similar.	F3a
10.	Develop measurement skills using customary and/or metric units.	F3a
10.1	Given a plane figure and a ruler, measure a line segment of that figure.	F3a
10.2	Given a plane figure and a protractor, measure an interior angle of that figure.	F3a
10.3	Given a plane figure, determine its perimeter and /or circumference and apply the concepts to problem-solving situations.	F2a, F3a
10.4	Given a polygon, determine its area and apply the concepts to problem-solving situations.	F2a, F3a
11.	Collect, organize, analyze, and interpret data through the use of funda-mental analysis procedures and communicate appropriate conclusions.	F1, F2a, F3a
11.1	Given a bar, line, or picture graph, interpret and analyze the data.	F2a, F3a
11.2	Choose an appropriate scale and construct a graph or diagram using a set of numerical data.	F3a
11.3	Given a problem situation, collect, organize, and present the numerical data in a variety of forms.	F3a
11.4	Given a set of data containing 3-digit numbers, present this data in a stem-and-leaf or box-and-whisker plot.	F3a
11.5	Identify the appropriate graph for a given set of data.	F3a
11.6	Given a set of data, find the measures of central tendency (mean, median, mode).	F3a
11.7	Given a set of numerical data, determine the ordered pairs and make a scatter plot.	F3a
11.8	Make appropriate inferences and predictions based on analysis of a given set of data.	F2a, F3a
12.	Develop an understanding of the basic concepts of probability and an ability to apply these concepts to making appropriate predictions.	F3a
12.1	Determine the number arrangements of several objects by using the Basic Counting Principle or by using a diagram.	F3a
12.2	Find the number of permutations of three objects.	F3a
12.3	Find the number of combinations of three objects.	F3a

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13.	**Develop an understanding of ratios, proportions, and percents with applications to problem-solving.**	F2a, F3a
13.1	Use proportions to solve problems.	F2a, F3a
13.2	Solve real life problems involving discount, tax, interest, markup, and/or statistics using the concept of percent.	F2a, F3a
14.	**Develop explorations of algebraic concepts and processes.**	F3a
14.1	Given an equation, determine the value of the variable.	F3a
14.2	Plot points on an x/y axis.	F3a
14.2	Given a problem, write an equation and find its solution.	F3a
15.	**Develop and reinforce appropriate skills in the use of calculators and computers in problem-solving situations.**	F2a, F3a, F5a
15.1	Use the calculator to solve word problems involving whole numbers and decimals.	F2a, F3a, F5a
15.2	Use the calculator to explore patterns and relationships among whole numbers and decimals and rational numbers.	F2a, F3a, F5a
15.3	Use the computer to explore number relationships and geometrical relationships.	F2a, F3a, F5a
15.4	Use the computer as a tool to analyze and represent data and to solve problems.	F2a, F3a, F5a

Kansas

Documents Utilized

Kansas Curricular Standards for Communication (September, 1993)
Kansas Mathematics Curriculum Standards (revised July, 1993)
Kansas Curricular Standards for Science (March, 1993; reprinted, February, 1994)

Background

In 1991, the legislature mandated state assessments based on what students should know and be able to do. The first draft of the math standards was completed in 1990 and has been revised several times since then; standards in other subjects were completed initially in 1993 and are now being revised. Each subject has a different age grouping. For example, the math standards describe student learning for grades K-4, 5-8, and 9-12. Districts are not required to adopt the curriculum standards; however, the standards form the basis for the state's testing system.

Kansas

CURRICULAR STANDARDS FOR SCIENCE	NCEO CODE
Student Outcome 1 All students will demonstrate in academic and applied situations a high level of mastery of essential skills as evidenced by the following standards:	
A. Read and comprehend a variety of resources.	F3b
B. Communicate clearly, both orally and in writing, for a variety of purposes and audiences.	F1a, F3c
C. Use mathematics and mathematical principles.	F3a
D. Access and use information.	F4
Student Outcome 2 All Students will demonstrate effective communication skills as evidenced by the following standards:	
A. Analyze, summarize, and comprehend what is read in all subject areas.	F3b
B. Write and orally communicate for: 1. clear articulation, 2. analysis, 3. conceptualization, 4. synthesis, and 5. summarization of information.	F1a, F2a, F3b
Student Outcome 3 All students will demonstrate complex thinking skills academic and applied situations as evidenced by the following standards:	
A. Apply problem-solving skills.	F2a
B. Find information; process, analyze, and synthesize it; and apply it to new situations.	F2a, F4
C. Use creative, imaginative, and divergent thinking to formulate and solve problems, and to communicate the results.	F2a, F4
Student Outcome 4 All students will demonstrate the necessary characteristics to work effectively both independently and in groups as evidenced by the following standards:	
A. Work collaboratively in teams.	G4b
B. Work together without prejudice, bias, or discrimination, using techniques to separate people from problems, focusing on interests not positions, inventing options for mutual gain, and using objective criteria.	G3b, G4b

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	NCEO CODE
Student Outcome 5	
All students will demonstrate physical and emotional well-being as evidenced by the following standard:	
A. Have the knowledge, skills, and behaviors essential to live a healthy and productive life.	C1, E
THE NATURE OF SCIENCE	
THE LEARNER (GRADE 8):	
1. Applies problem solving skills.	F2a, F4a
Integrates science process skill in problem solving.	F2a, F4a
Evaluates the strengths and weaknesses of claims, arguments or data.	F2a, F4a
Generates scientific questions based upon observations.	F4a
Designs and conducts simple investigations.	F4a
Identifies and controls variables in experimentation.	F4a
Uses appropriate technology as a tool in problem solving.	F4a, F5a
Interprets the results of experimentation using statistical reasoning.	F3a, F4a
Uses appropriate technology as a tool in problem solving.	F2a, F4a, F5a
2. Solves Problems Cooperatively.	F2a, G4b
Participates in a science investigation team to resolve a student- and/or teacher-facilitated problem.	A2a, F2a, G4b
Expresses support and acceptance toward group members.	G3a
Performs and articulates selected group roles and responsibilities.	D1a, E1a
Identifies effective behaviors that contribute to successful group productivity.	F4
3. Expresses Creativity in Problem Solving.	F2a
Designs and performs a controlled experiments to test and assigned problem.	F4a
4. Applies Problem-Solving Skills to Authentic, Community Based Issues.	F2a, F4a
Conducts research using community resources.	F4a
5. Demonstrates and Values and Inquiring Attitude (as evidenced by curiosity, openness to new ideas, respect for reason, and a reliance on data, facts and observations, etc.).	F4a
Considers alternative points of view.	F2a
Asks questions at a variety of levels (recall, comprehension, application, analysis, synthesis, and evaluation).	F1a, F4a
Seeks evidence for conclusions.	F2a, F4a
Applies processes of science in personal decision-making.	F4a
6. Exhibits Safe and Proper Techniques for Using Instruments and Materials of Science.	C1a, F4a
Uses simple measuring devices to make metric measurements.	F4a
Demonstrates laboratory safety.	C1a, F4a
THE MEANING OF SCIENCE COMMUNICATED (Receiving, interpreting, and giving information that has meaning).	
THE LEARNER (GRADE 8):	
1. Receives and interprets meaning from information or observed phenomena.	F2a, F4a
Describes an object, event, process, procedure, or phenomenon using scientific terms.	F1, F4a
Demonstrates the ability to follow written and oral directions.	F1, F4
Uses research skills in locating information from printed and electronic media and empirical observations.	F4
2. Communicates meaning to others using oral language, written language, mathematics, symbols, tables, graphs, visual aids, and technology.	F1a, F3a, F3c, F4a, F5a

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Communicates scientific understandings using oral language, written language, mathematics, symbols, tables, graphs, visual aids, and/or technology.	F1a, F3a, F3c, F4a, F5a
Organizes and presents information and data in ways that others can understand it.	F1
Describes an experimental process or procedure so that it can be replicated by others.	F1, F4a
THE INTEGRATION OF SCIENCE (All the fields of science are interrelated with each other and with other disciplines. Themes are the conceptual organizations of accumulated knowledge within science disciplines.)	F4a
THE LEARNER (GRADE 8):	
1. Explains and interprets theories and concepts in the life, earth and physical sciences using unifying themes, including, but not limited to Energy/Matter, Patterns of Change, Systems and Interactions, Patterns of Stability and equilibrium, and Models.	F4a
Systems and Interactions	
Analyzes and connects systems and their interactions in the natural world.	F2a, F4a
Energy and Matter	
Understands that forms and interactions of matter and energy determine the nature of the environment.	F4a
Patterns of Change (Trends, cycles, chaos)	
Identifies patterns of change in the natural an technological world as trends, cycles, or chaos.	F4a
Stability (Equilibrium, conservation, symmetry)	
Cites examples from the natural world of equilibrium.	F4a
Explains how matter and energy are conserved in natural phenomena.	F4a
Show examples of how upset equilibrium's can return.	F4a
Model (physical, conceptual, and mathematical)	
Describes the use of models in the workings of technology.	F4a
Represents phenomena with physical, conceptual, and mathematical models.	F4a
Explains rationale for using models.	F4a
THE RELATIONSHIP OF SOCIAL, TECHNOLOGICAL, AND SCIENTIFIC ISSUES (Science and Technology have complex interrelationships with social and physical environments.)	
THE LEARNER (GRADE 8):	
1. Applies reasoned decision-making skills to issues of personal and public concern.	F2a, F4a
Explains how science, mathematics and technology apply in real world situations.	F3a, F4a
Makes decisions related to personal health, nutrition and lifestyle based on knowledge of scientific concepts.	C1, C1a, F4a
Understand that science and technology can affect individual lifestyles.	F4a
Recognizes science as a key component of many careers.	F4a
2. Analyzes how science and technology change our social and physical environment.	F4a
Invents a device to solve problems or meet specific needs.	F2a, F4a
Discusses the historical development of key scientific concepts and principles.	F4a
Recognizes the contributions made in science by people of different cultures, gender, and ethnic backgrounds.	F4a
Understands that the developments of science and technology affect the condition of life.	F4a
Analyzes how imagination and society's needs influence scientific and technological advancements.	F4a
3. Evaluates the interrelationships between the beliefs of societies and the way in which science and technology are applied.	F4a
Explains interrelationships between research, technology, and society's responses.	F4a
Analyzes the ecological impact humans have on the equilibrium of the biosphere.	F4a

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Evaluates issues that relate to ecological responsibility.	F4a
CURRICULAR STANDARDS FOR COMMUNICATIONS	
COMMUNICATIONS DEVELOPMENT PROGRAM ESSENTIAL OUTCOMES AND BENCHMARKS	
1. Learners will speak and write for a variety of audiences and purposes and listen and read for a variety of purposes. To communicate effectively, students must have clear purpose, the strategies and skills to accomplish that purpose, and they must know with whom they are communicating.	F1, F1a, F3c
ESSENTIAL COMMUNICATION BENCHMARKS: MIDDLE SCHOOL The Learners Will:	
A. prepare writing and speaking for the world outside their classroom.	F1a, F3c
B. describe their attitudes toward what they are reading and writing and the effect these attitudes have on their purpose.	F3b, F3c, F4
C. demonstrate control over such features of writing as ideas that are well developed, clear, and interesting; an authentic and appropriate voice; organization that helps the reader; effective word choice; clear and fluent sentences; conventions (spelling, capitalization, punctuation, usage), and clear handwriting and appropriate punctuation.	F3c
D. demonstrate control over such features of speaking as audience analysis, message construction (using the features mentioned in item C above), and delivery.	F1a
E. discover and demonstrate their own best reading and writing processes as they generate, arrange, select, evaluate, and revise their ideas.	F3b, F3c
F. identify the purpose of the writer's or speaker's message and reflect upon how that purpose affects the learner and/or the audience.	F1, F2a, F3b
G. demonstrate their understanding that reading is not a set of steps, but rather a process that varies with material to be read, the reader's purpose, and other factors unique to the individual reader.	F3b
2. The learners will use language to construct meaning of their own and to understand the meaning of other people. Students use language to make connections among school subjects and between school subjects and their own experiences. Through this process, students see a larger picture and arrive at increased clarity, order, and subtlety of understanding.	F3b
ESSENTIAL COMMUNICATION BENCHMARKS: MIDDLE SCHOOL The Learners Will:	
A. apply past experiences and prior knowledge in order understand better new information and experience.	F4
B. describe logical, ethical, and emotional appeals.	F2a, F4
C. describe how some propaganda techniques attempt to influence them.	F2a, F4
D. distinguish between deductive and inductive reasoning and use logical reasoning in their reading, writing, listening, and speaking.	F1, F1a, F3b
E. explain how the language we use can limit or advance our thinking.	F4a
F. demonstrate their understanding that all people do not arrive at the same meanings, that our experience influences the meaning we come to, and that meaning is influence by culture, race, gender, and socioeconomic status.	F4a
G. use reading, writing and oral language s tools for learning, both in the classroom and in the public world.	F1, F3b, F3c
3. Learners will demonstrate an understanding of the development nature of language. Some basic theoretical knowledge should help students understand why communication succeeds and fails and how to ensure frequent success.	F4a

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ESSENTIAL COMMUNICATION BENCHMARKS: MIDDLE SCHOOL The Learners Will:	
A. demonstrate their understanding that the ability to learn language is innate and that learners' language is influenced by their environment.	F4a
B. demonstrate their understanding of the importance to children's language development of reading and talking to young children in order to fulfill the learners' responsibilities as role models.	F4a
C. demonstrates an understanding that language is symbolic, arbitrary, and systematic.	F4a
D. demonstrate an understanding of how language changes.	F4a
F. demonstrate an understanding that grammar is an attempt to describe a language.	F4a
G. demonstrate an understanding of the communication process by interpreting, analyzing, and improving faulty communication.	F1, F2a, F4a
4. Learners will recognize that in a multicultural society there will be numerous languages and dialects, and they will accord each language and dialect equal status as a social expression of human experience. No language or dialect is linguistically superior to another, just as no culture is inherently superior to another culture. Unfortunately, many people are restricted from favored social status or improved economic advantages because their language or dialect is considered inferior. American students need to honor diversity in language as part of honoring diverse cultures; especially compelling is the need to honor the dialects and cultures that are within our own borders. At the same time, students must recognize the importance of appropriate levels of usage. In practice, such recognition involves the selection of the speaker's or writer's social dialect most appropriate to audience and purpose. In this sense, "standard" English represents a dialect that should be common to all rather than a label of favored social status. Nonstandard dialects, including attempts by foreigners to speak English, are not corruptions of standard English but rather communication which uses rule systems not shared by standard English.	F4a, G3b
ESSENTIAL COMMUNICATION BENCHMARKS: SECONDARY, MIDDLE AND ELEMENTARY SCHOOL	
A. demonstrate control of standard American English.	F1, F4a
B. demonstrate in their speaking and writing that they value their own language and dialect.	F1a, F3b
C. demonstrate and understanding that no language or dialect is superior to another.	G3b
D. demonstrate an understanding of why some languages and dialects are misjudged as superior to others.	F4a, G3b
E. demonstrate an understanding that to meet their purpose, writers and speakers will choose form among dialects they speak, and they will choose a degree of formality or informality.	F4a
F. demonstrate a familiarity with the literature of diverse cultures and with the work of both men and women speakers and writers.	F4b
5. Learners will enhance their creative and critical thinking by developing and describing their own standards for aesthetic and critical evaluation. In addition to developing technical proficiency in the receptive and productive aspects of oral and written language, students need to develop their own unique standards for appreciating and critiquing human expression. The development of personal standards extends the resources of the entire language community.	F2a, F4b
ESSENTIAL COMMUNICATION BENCHMARKS: SECONDARY AND MIDDLE SCHOOL The Learners Will:	
A. create and critique their own criteria for assessing written and oral expression responsive to author purpose and audience need.	F1, F2a, F4

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B. demonstrate an understanding that personal and varied interpretation is part of the richness of any art.	F4b
C. interpret and evaluate literary and dramatic activities and works with openmindedness, curiosity, and a willingness to ask questions.	F2a, F4b
6. Learners will use a variety of print, non-print, and technological resources to find information for critical and creative thinking.	F2a, F5a
Creative and critical thinking require access to information.	
ESSENTIAL COMMUNICATION BENCHMARKS: SECONDARY, MIDDLE AND ELEMENTARY SCHOOL	
The Learners Will:	
A. create written and spoken work with information from a variety of technologies in schools, libraries and communities.	F1a, F3b, F5a
B. select the technologies appropriate for the ways they learn best.	F5a
C. demonstrate that they can create work of their own with the help of information from others.	D3e
7. Learners will demonstrate the interpersonal and group communication skills necessary to work with others.	F1, G4b
Though we frequently think of ourselves as a nation of individuals, cooperation and teamwork have always been important to us and will continue to be important.	
ESSENTIAL COMMUNICATION BENCHMARKS: SECONDARY AND MIDDLE SCHOOL	
The Learners Will:	
A. function effectively in a variety of roles within formal and informal groups.	D1a, G4b
B. seek accurate information about topics under discussion and communicate a point of view honestly.	E
C. refine and describe their understanding of the right of free speech.	E
D. demonstrate a systematic approach to solving problems in a variety of situations.	F2a
E. resolve conflict through negotiation and compromise.	G4c
F. analyze and respect differences in attitude, behavior, values, and beliefs.	G3a, G3b
G. identify, reflect upon, critically evaluate, and adjust appropriately the means they use to communicate strong feelings.	F2a, G1b
H. accept criticism, disagreement, disappointment, and compliments appropriately.	G1
I. avoid interfering in the communication of others.	G3a
K. demonstrate sensitivity to those with physiological communication difficulties, such as difficulties with hearing, articulation, vision, and language.	G3b
L. demonstrate sensitivity to those with clinical speech apprehension.	G3b
CURRICULAR STANDARDS FOR SOCIAL STUDIES, K-8	
Program Outcome 1: Students will use appropriate concepts, processes, and tools from a variety of disciplines in thinking critically and creatively about knowledge.	F2a, F4
Student Outcome 1a: Students will demonstrate in depth use of a range of disciplines to acquire, organize, reorganize, generate, and apply knowledge.	F4
By The 8th Grade Level, Students Individually And Collaboratively Will:	
Benchmarks	
Use tools, skills, terminology, and concepts from the social sciences, the humanities, the natural sciences, and mathematics	

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in finding information on a topic, and issue, or a situation,	F4
in arranging information in usable formats,	F4
in analyzing, evaluating, and making connections in information,	F2a, F4
in synthesizing, imagining, and elaborating on information,	F2a, F4
in achieving a goal or producing a decision or solution, and	F4
in creating written, spoken, and symbolic products to present the results of an investigation.	F1a, F3c, F4
Indicators	
Use a variety of **techniques and resources** in acquiring information (e.g., reading, listening, interviews, observations, maps, atlases, graphs, charts, photographs, documents, artifacts, computer data bases).	F1, F3b, F4, F5a
Use a variety of **representations and patterns** in organizing information (e.g., models, symbols, graphics, descriptions, sequences, problems/solutions, concepts/ characteristics/examples).	F4
Use a variety of **reasoning strategies** in translating issues and situations, processing information, and communicating conclusions (e.g., analyzing, connecting, evaluating, synthesizing, imagining, elaborating, problem solving, designing, decision making).	F1, F2a, F4
Use a variety of **tools and methods** in communicating results of investigations (e.g., oral and written reports, videotapes, small group and classroom discussions, debates, maps, graphs, tables, flowcharts, collages, stories, plays, outlines, songs, paintings, pictures).	F4
By The 8th Grade Level, Students Individually And Collaboratively Will:	
Benchmarks	
Analyze and make judgements about the ways in which societies organize for producing and distributing goods and services.	F2a, F4a
Analyze and make judgements about the ways in which societies organize for governing and maintaining order.	F2a, F4a
Analyze and make judgements about the ways in which societies organize human groups.	F2a, F4a
Analyze and make judgements about the influence of culture and cultural diversity.	F2a, F4a
Analyze and make judgements about the influence of time, continuity, and change.	F2a, F4a
Analyze and make judgements about the influence of space and place.	F2a, F4a
Analyze and make judgements about the influence of scarcity.	F2a, F4a
Analyze and make judgements about the influence of interdependence.	F2a, F4a
Analyze and make judgements about the influence of science and technology.	F2a, F4a
Give examples of and reason for economic, legal, political, and social conditions and motivations which contribute to cooperation, competition, and conflict among societies.	F4a
Analyze and make judgements about the ways in which different societies address recurring problems.	F2a, F4a
Indicators:	
Use the following perspectives interpreting issues and problems:	
Economic (i.e., a perspective which focuses on questions concerning production, distribution, and consumption of goods and service within and among a economic systems. Concepts such as scarcity, opportunity cost, trade-off, and productivity serve as organizers around which questioning occurs in this perspective).	F4a
Environmental (i.e., a perspective which focuses interdependent relationships among the life forms, ecosystems, and human societies of the Earth. Concepts such as system, interaction, adaptation/modification, and change serve as organizers around which questioning occurs in this perspective).	F4a
Historical (i.e., a perspective which focuses on questions concerning ways people view themselves in and over time. Concepts such as time, causation, change/continuity, and conflict serve as organizers around which questioning occurs in this perspective).	F4a

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Spatial (i.e., a perspective which focuses on questions concerning location and place of Earth's physical and human features. Concepts such as pattern, distance, connection, and interaction serve as organizer around which questioning occurs in this perspective).	F4a
Civic (i.e., a perspective which focuses on questions concerning ways people exercise rights, privileges, and obligations of citizenship. Concepts such as system, authority, power, and justice serve as organizers around which questioning occurs in this perspective).	F4a
Cultural (i.e., a perspective which focuses on questions concerning ways groups of people live. Concepts such as group, institution, community, and culture, serve as organizers around which questioning occurs in this perspective).	F4a
Age (i.e., a perspective which focuses on questions concerning ways societies link expectations of people to age. Concepts such as culture, norm, status, and law serve as organizers around which questioning occurs in this perspective).	F4a
Gender (i.e., a perspective which focuses on questions concerning ways societies influence and shape gender roles. Concepts such as culture, role, status, and socialization serve as organizers around which questioning occurs in this perspective).	F4a
By The 8th Grade Level, Students Individually And Collaboratively Will:	
Benchmarks	
Design, evaluate, and put in action strategies for addressing question at issues and problems to be solved in life-role situations such as learner, citizen, worker/producer, consumer, investor, friend, member of social groups, and family member.	F2a, F4a
Formulate, evaluate, and defend strategies for resolving conflicts which persist within and across societies.	F2a, F4a
Indicators	
Evaluate, take, and defend positions (e.g., envision the "ideal" setting or circumstances; describe the present situation; construct, evaluate, and implement a plan of action to move form the present circumstance to the more ideal one; and evaluate the status of both the present an ideal conditions over time and make adjustments in the plan of action as necessary).	F2a, F4a
Research issues and problems (e.g., question resource persons making presentations in the classroom; participate in classroom activities such as simulations of hearings, board meetings, and lobbying; interview community members involved in social and political actions; observe board hearings and, if appropriate, make presentations).	F4, F4a
Monitor public policy making (e.g., track a issue or problem in the news media, gather information form interest groups and political parties, interview public officials, observe how policy is carried out in public settings through classroom visits to local sites such as courts, hospitals, city halls).	F4a
Influence public policy making (e.g., take part in classroom activities such as simulations of hearings, consensus and coalition building, and lobbying and presentations of positions on issues and problems to school and community members).	E3a
Use the following perspectives in interpreting issues and problems and in creating strategies for personal and public policies and actions: (indicators 8-k, outcome 2b, continued)	
Economic (i.e., a perspective which focuses on questions concerning production, distribution, and consumption of goods and service within and among economic systems. Concepts such as scarcity, opportunity cost, trade-off, and productivity serve as organizers	F4a

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around which questioning occurs in this perspective).	
Environmental (i.e., a perspective which focuses interdependent relationships among the life forms, ecosystems, and human societies of the Earth. Concepts such as system, interaction, adaptation/ modification, and change serve as organizers around which questioning occurs in this perspective).	F4a
Historical (i.e., a perspective which focuses on questions concerning ways people view themselves in and over time. concepts such as time, causation, change/continuity, and conflict serve as organizers around which questioning occurs in this perspective).	F4a
Spatial (i.e., a perspective which focuses on questions concerning location and place of Earth's physical and human features. Concepts such as pattern, distance, connection, and interaction serve as organizers around which questioning occurs in this perspective).	F4a
Civic (i.e., a perspective which focuses on questions concerning ways people exercise rights, privileges, and obligations of citizenship. concepts such as system, authority, power, and justice serve as organizers around which questioning occurs in this perspective).	F4a
Cultural (i.e., a perspective which focuses on questions concerning ways groups of people live. Concepts such as group, institution, community, and culture, serve as organizers around which questioning occurs in this perspective).	F4a
Age (i.e., a perspective which focuses on questions concerning ways societies link expectations of people to age. Concepts such as culture, norm, status, and law serve as organizers around which questioning occurs in this perspective).	F4a
Gender (i.e., a perspective which focuses on questions concerning ways societies influence and shape gender roles. Concepts such as culture, role, status, and socialization serve as organizers around which questioning occurs in this perspective).	F4a
Program Outcome 3: Students will develop civic competence and responsibility.	D1a, E, E1a
Student Outcome 3a: Students will demonstrate in depth use of civic understandings, skills and dispositions.	D, E, E1a
By The 8th Grade Level, Students Individually And Collaboratively Will:	
Benchmarks	
Evaluate the ways in which the behaviors and skills of individuals influence public problem solving and decision making.	F4a
Evaluate the ways in which the relationships among individuals, groups, and institutions influence public problem solving and decision making.	F4a
Evaluate the ways in which the ideals, principles, and practices of citizenship in American constitutional democracy influence public problem solving and decision making.	F4a
Design, evaluate, and put in action strategies for participation in civic life that involve addressing a real life need,	A2e, D1a, E3c
Bringing school and community issues and problems into the classroom for discussion and reflection,	A2e, D1a, E3c
Building collaborative relationships within and across the classroom, school, and community, and	A2e, D1a, E3c
Developing a tangible product for public view.	A2e, D1a, E3c
Indicators	
Analyze and make judgements about the utility of the following dispositions or traits of character in facilitating thoughtful and effective participation in problem solving and decision making:	F2a, G4b
Civility (i.e., treating others with respect, listening to other points of view, and avoiding hostile, abusive , emotional and illogical arguments),	G3a
Respect for law (i.e., abiding by laws, even though one may not be in complete agreement with every law),	E1a
Openmindedness (i.e., considering other points of view),	G3

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Critical mindedness (i.e., questioning the validity of various positions, including one's own),	F2a
Negotiation and compromise (i.e., coming to agreement with those with whom one may differ), and	G4b, G4c
Persistence (i.e., attempting again and again to accomplish a worthwhile goal).	D3e
Analyze and make judgements about the ways in which racial, religious, ethnic, geographic, and linguistic diversity influences the problems solving and decision making processes (e.g., conflicts about values, principles, and interest may make agreement on particular issues such as abortion or desegregation difficult or impossible).	F2a, F4a
Analyze and make judgements about the ways in which personal, social, religious, and economic relationships and organizations influence problem solving and decision making (e.g., provide opportunities for individuals to associate around common purposes, make it possible for individuals to concentrate their influence on government).	F2a, F4a
Analyze and make judgements about the conflicts that exist among the fundamental values and principles of American constitutional democracy (e.g., conflicts between liberty and equality, free speech and privacy, individual rights and the common good).	F2a, F4a
Analyze and make judgements about the disparities that exist between the ideals of American constitutional democracy and the realities of American social and political life (e.g., slavery, segregation, equality of opportunity).	F2a, F4a
Analyze and make judgements about the utility of the following dispositions or trait of character in facilitating thoughtful and effective participation in problem solving and decision making:	F2a, F4a
Individual responsibility (i.e., fulfilling the moral and legal obligations of membership in society),	F2a, F4a
Self discipline/self-governance (i.e., adhering voluntarily to self-imposed standards of behavior rather than requiring the imposition of external controls),	F2a, F4a
Respect for the rights of individuals (e.g., the right to hold and to advocate diverse ideas, the right to join in associations to advance particular points of view),	F2a, F4a
Compassion (i.e., concerning one's self about and attending to the well-being of others),	F2a, F4a
Civic mindedness (i.e., concerning one's self about and attending to public affairs), and	F2a, F4a
Patriotism (i.e., maintaining loyalty to the values and principles underlying American constitutional democracy).	F2a, F4a
Analyze and make judgements about the effects of significant world political, economic, technological, cultural, demographic, and environmental developments on problem solving and decision making in American society (e.g., competing ethnic and religious loyalties, internationalization of capital, computer technology, mass markets, population growth, ozone depletion).	F2a, F4a
Analyze and make judgements about the ways in which personal, political, and economic rights influence problem solving and decision making (e.g., personal rights such as freedom of conscience and freedom of association and expression would play significant roles when applied to reducing a discrepancy between reality and American ideals).	F2a, F4a
Analyze and make judgements about the relationships among the following individual rights:	F2a, F4a
Personal rights (e.g., right to freedom of conscience, right to privacy and personal autonomy),	F2a, F4a
Political rights (e.g., right to freedom of speech, right to petition), and	F2a, F4a
Economic rights (e.g., right to acquire, use , transfer, and dispose of property).	F2a, F4a
Analyze and make judgements about the relationships between the following individual responsibilities:	F2a, F4a
Personal responsibilities (e.g., taking care of one's self, supporting one's family, and community) and	F2a, F4a
Public responsibilities (e.g., voting, serving as a juror).	F2a, F4a

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Analyze and make judgements about the relationships between the following forms of individual participation:	F2a, F4a
Political participation (e.g., petitioning political and law enforcement officials for more adequate protection against crime) and	F2a, F4a
Social participation (e.g., forming a neighborhood watch for crime).	F2a, F4a
MATHEMATICS CURRICULUM STANDARDS	
Program Outcome 1: The students uses mathematics to solve problems, understanding that may problems have more than one answer, there are multiple methods of solving problems, and answers may be represented in a variety of forms.	F3a
Formulates problems	F3a
Applies a variety of strategies to solve problems	F3a
Verifies and interprets results	F3a
Generalizes solutions	F3a
Program Outcome 2: The student uses mathematics to reason and analyze. recognizes valid and invalid arguments	F2a, F3a
Uses inductive reasoning to recognize patterns and form conjectures	F2a, F3a
Uses proportional and spatial reasoning to solve problems	F2a, F3a
Uses deductive reasoning to verify conclusions, judge the validity of arguments, and construct valid arguments	F2a, F3a
Program Outcome 3: The student uses mathematical language to communicate ideas and relate written expressions, oral expression, and mathematical symbols.	F1, F3a, F3c
Expresses mathematical ideas by speaking, writing, demonstrating, and depicting them graphically	F1a, F3a, F3c
Understands, interprets, and evaluates mathematical ideas that are presented in written, oral, or visual forms	F2a, F3a
Uses mathematical vocabulary, notation, and structure to represent ideas, describe relationships, and model situations	F3a
Asks clarifying and extending questions relating to problem situations within outside mathematics.	F1a, F3a
Program Outcome 4: The student applies mathematical knowledge and understanding of concepts.	F3a
Represents the same mathematical concept in different contexts, formats, and problem situations	F3a
Uses models, diagrams, and symbols to represent concepts	F3a
Identifies and generates examples and nonexamples	F3a
Identifies properties and conditions of a given concept	F3a
Compares and contrasts mathematical concepts	F2a, F3a
Program Outcome 5: The student applies mathematical procedures.	
Represents the same mathematical procedure in different contexts, formats, and problem situations	F3a
Recognizes and discusses correct and incorrect procedures	F3a
Reliably and efficiently executes procedures	F3a
Uses one or more methods to verify results	F3a
Extends or modifies existing procedures and explores new ones	F3a
Program Outcome 6: The student chooses and applies a variety of mathematical methods to investigate, conjecture, and/or verify results.	F3a
Determines whether an estimate or exact result is needed	F3a
Selects and appropriately uses technology	F3a, F5a
Selects and appropriately uses manipulative	F3a
Selects and appropriately uses models	F3a
Selects and appropriately uses other mathematical methods	F3a
Program Outcome 7: the student investigates connections of mathematical ideas and applications.	F3a

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Among the mathematical topics;	F3a
Among mathematics and other disciplines; and	F3a
Among mathematics and real-life problem situations	F3a
Program Outcome 8: The student works effectively in a variety of settings to learn mathematics and to solve problems situations within and outside mathematics.	F2a, F3a
Independently	F2a, F3a
In small discussion groups	F2a, F3a, G4b
In large groups	F2a, F3a, G4b
In cooperative groups	F2a, F3a, G4b
Program Outcome 9: The student demonstrates a positive disposition toward mathematics.	F3a
Confidence in using mathematics to solve problems, to communicate ideas, and to reason	F1, F2a, F3a, G2b
Flexibility in exploring mathematical ideas and trying alternative methods in solving problems	F2a, F3a, G2b
Willingness to persevere in mathematical tasks	D3e, F3a, G2b
Interest, curiosity, and inventiveness in doing mathematics	D3e, F3a, G2b
Inclination to monitor and reflect on their own thinking and performance	F3a, G2b
Valuing the applications of mathematics	F3a, G2b
Appreciation of the role of mathematics in a multicultural/multi-ethnic society	F3a, G2b
Curriculum Outcome 1: Number Sense and Systems (8th Grade)	
The student develops and demonstrates number sense for rational numbers to solve problems situations within and outside of mathematics.	F2a, F3a
Determines reasonableness of results	F3a
Develops and uses order relations for whole numbers, fractions, decimals, integers, and rational numbers.	F3a
Uses multiple representations for the same rational number	F3a
Estimates quantities using rational numbers	F3a
Curriculum Outcome 2: Number Sense and Systems (8th Grade)	
The student recognizes, applies, and explains properties of the rational number system and its operations.	F3a
Curriculum Outcome 3: Number Sense and Systems (8th Grade)	
The student investigates the history and structure of the rational number system.	F3a
Models and explains the relationships among counting numbers, whole numbers, integers, fractions, and rational numbers	F3a
Understands and appreciates the need for numbers beyond the whole numbers, simple fractions, mixed numbers, and decimals	F3a
Explores irrational numbers such as pi and square roots	F3a
Curriculum Outcome 4: Number Sense and Systems (8th Grade)	
The student explains, models, and performs operations with simple algebra and the rational number system to solve problems situations within and outside mathematics.	F2a, F3a
Selects and uses appropriate rational number estimation and computation	F3a
Selects and uses appropriate computational tools	F3a
Develops and explains computational procedures and estimation strategies	F3a
Uses estimation to check reasonableness of results	F3a
Curriculum Outcome 5: Patterns, Functions, Algebraic Concepts and Relationships (8th Grade)	
The student recognizes, describes, extends, develops, and explains a wide variety of patterns from problems situations within and outside of mathematics.	F2a, F3a
Curriculum Outcome 6: Patterns, Functions, Algebraic Concepts and Relationships (8th Grade)	
The student recognizes and describes linear functions and uses appropriate graphing technology to graph and analyze linear functions.	F3a
Understands x and y intercepts	F3a

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Explores slope as a characteristic of a linear function	F3a
Curriculum Outcome 7: Patterns, Functions, Algebraic Concepts and Relationships (8th Grade)	
The student recognizes, interprets, explains, and manipulates expressions involving variables. The student uses linear equations and inequalities to solve problem situations within and outside of mathematics.	F2a, F3a
Understands the concept of variable	F3a
Uses variables to generalize patterns, tables, graphs, and charts	F3a
Explains the difference between and equation and an expression	F3a
Verbalizes the meaning of symbolic expressions	F3a
Curriculum Outcome 8: Patterns, Functions, Algebraic Concepts and Relationships (8th Grade)	
The student develops and uses models to represent and justify mathematical relationships and to assist in the solution of problem situations within and outside of mathematics.	F2a, F3a
Curriculum Outcome 9: Geometry and Spatial Sense (8th Grade)	
The student recognizes, applies, and compares properties of common geometric figures using appropriate technology, manipulatives, or constructions.	F3a
Curriculum Outcome 10: Geometry and Spatial Sense (8th Grade)	
The student uses estimation, measurement formulas to solve problem situations within and outside of mathematics.	F2a, F3a
Describes attributes of two-dimensional figures and common three-dimensional figures	F3a
Investigates measurement formulas	F3a
Applies basic measurements formulas	F3a
Selects appropriate measurement tools, appropriate units of measurement, and appropriate degrees of accuracy	F3a
Curriculum Outcome 11: Geometry and Spatial Sense (8th Grade)	
The student investigates and explores two-dimensional geometry from and algebraic perspective to solve problem situations within and outside of mathematics.	F2a, F3a
Curriculum Outcome 12: Geometry and Spatial Sense (8th Grade)	
The student recognizes and performs transformations of two-dimensional geometric figures to solve problems within and outside of mathematics.	F2a, F3a
Curriculum Outcome 13: Probability and Statistics (8th Grade)	
The student explores the use of probability in real-life situations.	F3a
Devises and conducts experiments and simulations	F3a
Compares empirical results with theoretical results	F3a
Investigates combinatorics and probability theory	F3a
Recognizes the many uses of probability in the real world	F3a
Curriculum Outcome 14: Probability and Statistics (8th Grade)	
The students generates, reads, organizes and interprets data from problem situations within and outside of mathematics.	F2a, F3a
Understands and applies measures of central tendency (mean, median, and mode)	F3a
Selects and displays data in appropriate formats	F3a
Identifies and applies valid sampling techniques	F3a
Calculates and interprets the range of a set of data	F3a
Curriculum Outcome 15: Probability and Statistics (8th Grade)	
The student uses data analysis, statistics, and probability to generate convincing arguments, to draw conclusions, and to make decisions to solve problem situations within and outside of mathematics.	F2a, F3a

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Document Utilized

Kentucky's Learning Goals and Learner Outcomes (no date).

Background

In 1989, the governor created a 12-member Council on School Performance Standards to determine what Kentucky students should know and be able to do and how learning should be assessed. As part of the Kentucky Education Reform Act, passed in 1990, the state adopted six broad learning goals. The legislation authorized that the goals be framed in measurable terms. The resulting 75 learner outcomes are tied to the states broad goals for all students. For each outcome, benchmarks are provided to indicate student progress toward the outcome (elementary, middle, and high school).

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LEARNING GOALS AND LEARNER OUTCOMES		NCEO CODE
1.	Students are able to use basic communication and mathematics skills for purposes and situations they will encounter throughout their lives.	F1, F3a
1.1	Students use research tools to locate sources of information and ideas relevant to a specific need or problem.	F4
1.2	Students construct meaning from a variety of print materials for a variety of purposes through reading.	F3b
1.3	Students construct meaning from messages communicated in a variety of ways for a variety of purposes through observing.	F1
1.4	Students construct meaning from messages communicated in a variety of ways for a variety of purposes through listening.	F1
1.5	Students communicate ideas by quantifying with whole, rational, real, and/or complex numbers.	F1, F3a
1.6	Students manipulate information and communicate ideas with a variety of computational algorithms.	F1, F3a
1.7	Students organize information and communicated ideas by visualizing space configurations and movements.	F1, F3a
1.8	Students gather information and communicate ideas by measuring.	F1, F3a
1.9	Students organize information and communicate ideas by algebraic and geometric reasoning such as relations, patterns, variables, unknown quantities, deductive, and inductive processes.	F2a, F3a
1.10	Students organize information through development and use of classification rules and classification systems.	F4a
1.11	Students organize information through development and use of audiences for a variety of purposes in a variety of modes through writing.	F3c
1.12	Students communicate ideas and information to a variety of audiences for a variety of purposes in a variety of modes through speaking.	F1a
1.13	Students construct meaning and/or communicate ideas and emotions through the visual arts.	F4b
1.14	Students construct meaning and/or communicate ideas and emotions through music.	F4b
1.15	Students construct meaning from and/or communicate ideas and emotions through movement.	F4b
1.16	Students use computers and other electronic technology to gather, organize, manipulate and express information and ideas.	F1, F5a
2.	Students shall develop their abilities to apply core concepts and principles from mathematics, the sciences, the arts, the humanities, social studies, practical living studies, and vocational studies to what they will encounter throughout their lives.	F3a, F4, F4a, F4b

Kentucky

		NCEO CODE
SCIENCE		
2.1	Students use appropriate and relevant scientific skills to solve specific problems in real-life situations.	F2a, F4a
2.2	Students identify, compare, and contrast patterns and use patterns to understand and interprets past and present events and predict future events.	F4a
2.3	Students identify and describe systems, subsystems, and components and their interactions by completing tasks and/or creating products.	F4a
2.4	Students use models and scale to explain or predict the organization, function, and behavior of objects, materials, and living things in their environment.	F4a
2.5	Students understand the tendency of nature to remain constant or move toward a steady state in closed systems.	F4a
2.6	Students complete tasks and/or develop products which identify, describe, and direct evolutionary change which has occurred or is occurring around them.	F4a
MATHEMATICS		
2.7	Students demonstrate understanding of number concepts.	F3a
2.8	Students demonstrate understanding of concepts related to mathematical procedures.	F3a
2.9	Students demonstrate understanding of concepts related to space and dimensionality.	F3a
2.10	Students demonstrate understanding of measurement concepts.	F3a
2.11	Students demonstrate understanding of change concepts on patterns and functions.	F3a
2.12	Students demonstrate understanding of concepts related to mathematical structure.	F3a
2.13	Students demonstrate understanding of data concepts related to both certain and uncertain events.	F3a
SOCIAL STUDIES		
2.14	Students recognize issues of justice, equality, responsibility, choice, and freedom and apply these democratic principles to real-life situations.	E1a, F4a
2.15	Students recognize varying forms of government and address issues of importance to citizens in democracy, including authority, power, civic action, and rights and responsibilities.	F4a
2.16	Students recognize varying social groupings and institutions and address issues of importance to members of them, including beliefs, customs, norms, roles, equity, order and change.	F4a
2.17	Students interact effectively and work cooperatively with the diverse ethnic and cultural groups of our nation and world.	F4b
2.18	Students make economic decisions regarding production and consumption of goods and services related to real-life situations.	F4a
2.19	Students recognize the geographic interaction between people and their surroundings in order to make decisions and take actions that reflect responsibility for the environment.	E1a, F4a
2.20	Students recognize continuity and change in historical events, conditions, trends, and issues in order to make decisions for a better future.	F4a
2.21	Students observe, analyze, and interpret human behaviors to acquire a better understanding of self, others, and human relationships.	F2a, F4a
ARTS AND HUMANITIES		
2.22	Students create products and make presentations that convey concepts feelings.	F4b
2.23	Students analyze their own and others artistic products and performances.	F2a, F4b
2.24	Students appreciate creativity and values of the arts and the humanities.	F4b
2.25	Through their productions and performance or interpretation, students show an understanding of the influence of time, place, personality, and society on the arts and humanities.	F4b
2.26	Students recognize differences and commonalties in the human experience through their productions, performances, or interpretations.	F4b

Kentucky

		NCEO CODE
2.27	Students complete tasks, make presentations, and create models that demonstrate awareness of the diversity of forms, structures, and concepts across languages and how they may interrelate.	F4b
2.28	Students understand and communicate in a second language.	F1, F4a
	PRACTICAL LIVING	
2.29	Students demonstrate effective individual and family life skills.	D1a
2.30	Students demonstrate effective decision-making and evaluative consumer skills	D
2.31	Students demonstrate skills and self-responsibility in understanding, achieving, and maintaining physical wellness.	C1, C2, D3
2.32	Students demonstrate positive strategies for achieving and maintaining mental and emotional wellness.	G1
2.33	Students demonstrate the ability to assess and access health systems services and resources available in their community which maintain and promote healthy living for its citizens.	C1, D3
2.34	Students perform psychomotor skills effectively and efficiently in a variety of settings.	C3
2.35	Students demonstrate knowledge, skills, and values that have lifetime implications for involvement's in physical activity.	C1b, C2b
	VOCATIONAL STUDIES	
2.36	Students demonstrate strategies for selecting career path options.	A2f
2.37	Students produce and/or make presentations that communicate school-to-work/post-secondary transition skills.	F1, A2f
2.38	Students demonstrate the ability to complete a post-secondary opportunities search.	A2f
3.	Students shall develop their abilities to become self-sufficient individuals.	D3, E, F
3.1	Students demonstrate positive growth in self-concept through appropriate tasks or projects.	G2
3.2	Students demonstrate the ability to maintain a healthy lifestyle.	C1
3.3	Students demonstrate the ability to be adaptable and flexible through appropriate tasks or projects.	no match
3.4	Students demonstrate the ability to be resourceful and creative.	no match
3.5	Students demonstrate self-control and self discipline.	G1c
3.6	Students demonstrate the ability to make decisions based on ethical values.	E
3.7	Students demonstrate the ability to learn on one's own.	D3e
4.	Students shall develop their abilities to become responsible members of a family, work group, or community, including demonstrating effectiveness in community service.	A2e, D1a, E1a
4.1	Students effectively use interpersonal skills.	G4
4.2	Students use productive team membership skills.	G4b
4.3	Students individually demonstrate consistent, responsive, and caring behavior.	D1a, E3b, G3a
4.4	Students demonstrate the ability to accept the rights and responsibilities for self and others.	D3
4.5	Students demonstrate an understanding of, appreciation for, and sensitivity to multi-cultural and world view.	G3
4.6	Students demonstrate an open mind to alternative perspectives.	G
5.	Students shall develop their abilities to think and solve problems in school situations and in a variety of situations they will encounter in life.	F2a
5.1	Students use critical thinking skills in a variety of situations that will be encountered in life.	F2a
5.2	Students use creative thinking skills to develop or invent novel, constructive ideas or products.	no match
5.3	Students create and modify their understanding of a concept through organizing information.	F4
5.4	Students use a decision-making process to make informed decisions among options.	F2a

Kentucky

		NCEO CODE
5.5	Students use problem-solving processes to develop solutions to relatively complex problems.	F2a
6 .	Students shall develop their abilities to connect and integrate experiences and new knowledge from all subject matter fields with what they have previously learned and build on past learning experiences to acquire new information through various media sources.	F4
6.1	Students address situations (e.g. topics, problems, decisions, products) from multiple perspectives and produce presentations or products that demonstrate a broad understanding. Examples of perspective include: economic, social, cultural, political, historic, physical, technical, aesthetic, environmental, and personal.	F4
6.2	Students use what they already know to acquire new knowledge, develop new skills or interpret new experiences.	F4
6.3	Students expand their understanding of existing knowledge (e.g. topic, problem, situation, product), by making connections with new and unfamiliar knowledge skills and experiences.	F4

Maryland

Document Utilized

Learning Outcomes in Mathematics, Reading, Writing/Language Usage, Social Studies, and Science for Maryland School Performance Assessment Program (May, 1990).

Background

In December 1989, the Maryland State Board of Education established the Maryland School Performance Program, a systematic outcome-based approach for promoting student achievement and school performance. One component of this program features the development of new criterion-referenced assessment batteries in key subject areas for students in grades 3, 5, 8, and 11. The learning outcomes are broad in scope and will guide test contractors in their work with Maryland teachers and curriculum supervisors in the development of the assessments. The learning outcomes are mandatory. They are tied to the state assessments, which are part of a statewide accountability system for schools and school districts.

Maryland

LEARNING OUTCOMES IN MATHEMATICS, READING, WRITING/LANGUAGE USAGE, SOCIAL STUDIES, AND SCIENCE	NCEO CODE
MATHEMATICS--GRADES 3, 5, AND 8	
Students will demonstrate their ability to solve problems in mathematics including problems with open-ended answers, problems which are solved in cooperative atmosphere, and problems which are solved with the use of technology.	F2a, F3a, F5a
Students will demonstrate their ability to communicate mathematically. They will read, write, and discuss mathematics with language and the signs, symbols, and terms of the discipline.	F1, F3a
Students will demonstrate their ability to reason mathematically. They will make conjectures, gather evidence, and build arguments.	F2a, F3a
Students will demonstrate their ability to connect mathematics topics within the discipline and with other disciplines.	F3a
Students will demonstrate their ability to apply estimation strategies in computation, with use of technology, in measurement, and in problem solving. They will determine reasonableness of solutions.	F3a, F5a
Students will demonstrate their ability to solve problems using arithmetic operations with technology where appropriate.	F2a, F3a, F5a
Students will demonstrate their ability to describe and apply number relationships using concrete and abstract materials. They will choose appropriate operations and describe effects of operations on numbers.	F3a
Students will demonstrate their ability to apply geometric relationships using one, two and three dimensional objects. They will demonstrate congruency, similarity, symmetry, reflection and apply these concepts to the solution of the geometric problems.	F3a
Students will demonstrate and apply concepts of measurement using non-standard and standard units and metric and customary units. They will estimate and verify measurements. They will apply measurement to interdisciplinary and real world problems solving situations.	F2a, F3a
Students will demonstrate the basic concepts of probability such as predicting and finding probabilities.	F3a
Students will demonstrate their ability to recognize numeric and geometric relationships and will generalize a relation from data.	F3a

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	NCEO CODE
Students will demonstrate their ability to perform algebraic operations and will be able to model algebraic concepts using concrete materials.	F3a
Students will demonstrate a positive attitude toward mathematics and will value and appreciate the role of mathematics in school, the culture, and society.	F3a
GRADE 8	
COMPUTATIONS AND ESTIMATION (Use calculator as appropriate; use applications; may include fractions and decimals in same problem)	
Add, subtract, multiply, divide whole numbers, fractions, decimals, integers, rationals.	F3a
Given a problem, write the appropriate proportion and solve it	F3a
Choose an appropriate operation to solve a problem	F3a
Determine if a solution is sensible (pg. 97)	F3a
Use various estimation strategies	F3a
Estimate before calculating	F3a
Solve problems involving money, time, and elapsed time	F2a, F3a
Understand the meaning of the operations	F3a
NUMBER AND NUMBER RELATIONSHIPS	
Represent and use numbers in a variety of equivalent forms such as integers, percents, scientific notation, fractions, decimals, exponential notation, rationals	F3a
Describe relationships among fractions, decimals, percents	F3a
Apply rations and proportions (scale drawings, maps)	F3a
Apply percents (discounts)	F3a
Represent relationships on a two dimensional graph. (ordered pairs) (p 207)	F3a
NUMBER SYSTEMS AND NUMBER THEORY	
Describes effects of arithmetic operations	F3a
Order numbers (integers, fractions, decimals, rationals)	F3a
Be able to use various strategies to solve problems	F2a, F3a
GEOMETRY	
Draw and describe the results of transformation such as reflections and rotation (slides, flips, turns)	F3a
Describe quantitatively geometric relationships such as a number of sides, faces, vertices, diagonals, sums of angles.	F3a
Distinguish between and apply congruency and similarity to the solution of geometric problems.	F3a
Apply Pythagorean theorem	F3a
Describe angle relationships formed by a transversal and parallel lines	F3a
Do simple constructions such as angle bisectors (p 112)	F3a
MEASUREMENT (include: nonstandard and standard units; metric and customary units)	
Determine area by partitioning	F3a
Determine volumes and surface areas of solids	F3a
Determine area of polygons	F3a
Determine perimeter of figures including irregular	F3a
Estimate and verify measurements by using measuring tools	F3a
Use the concepts of rate and indirect measurement in the solutions of problems	F2a, F3a
Select the appropriate unit of measurement and the tool to find the measurement	F3a
Apply measurement to inter-disciplinary and real-world problem solving situations such as elapsed time.	F2a, F3a
STATISTICS (use calculator as appropriate)	
Construct circle graphs	F3a
Collect organize, display, interpret data for given situations using appropriate display such as circle graphs, box and whisker plots, scatter plots, glyphs	F3a
Use data analysis to write an evaluative argument in a real life situation	F3a
Determine the best measure of central tendency and calculate it	F3a
PROBABILITY (extensive hands-on)	

Maryland

	MSPAP CODE
Use simulations to develop a model for real-life situations	F3a
Find probability of dependent and independent events	F3a
Predict and then determine probability by experimentation including certainty, impossibility, equally likely, not equally likely events	F3a
PATTERNS AND FUNCTIONS (numeric and geometric)	
Given a functional relationship, describe how a change in one variable results in a change in the other (given a circle, describe the change in area if radius is doubled)	F3a
Generalize a relation form a pattern, graph, table and given a relation, represent it by a pattern, graph, table (100-101)	F3a
ALGEBRA	
Evaluate algebraic expressions (include exponents)	F3a
Solve simple equations, inequalities	F2a, F3a
Given a problem situation, crate a model, table, and write the rule (p 103)	F3a
Distinguish between an unknown and variable	F3a
Use order of operations	F3a
Solve systems of linear equations by graphing	F3a
Simplify algebraic expression by combining like terms (model with chips)	F3a
READING OUTCOMES--GRADES 3,5,8 AND 11	
Students will demonstrate positive attitudes towards a reading variety of texts	F3b
Students will demonstrate their ability to construct, extend, and examine meaning for a variety of texts by using strategic behavior and integrating both their prior knowledge about reading and topic familiarity.	F2a, F3b
Students will demonstrate their ability to vary their orientation to the text by interacting with a variety of texts for different purposes. Students will read for literary experience (novels, plays, short stories), to be informed (content texts, articles, editorials), and to perform a task (follow directions, some action required of students).	F3b, F4b
Students will demonstrate their ability to interact with texts through four stances: global understanding, developing interpretation, personal reflection/response, and critical stance in order to construct, examine, and extend meaning.	F3b
Students will demonstrate their ability to construct a global understanding when reading a variety of texts for different purposes by considering such things as the main theme or topic and the author's overall purpose or point of view.	F3b
Students will demonstrate their ability to develop an interpretation for a variety of texts and purposes by revisiting the text. Students will clarify, verify, and revise their understanding by considering such things as plot and character development, by organizing text information, or by following directions to complete a task.	F3b
Students will demonstrate their ability to construct a personal reflection/response by considering their prior knowledge and information from the text. Students will compare the author's point of view with their own or new information from the text with their own background knowledge	F3b
Students will demonstrate their ability to construct a critical stance for a variety of texts and purposes. In forming and substantiating a critical response, students will identify and analyze the author's perspective and craft.	F2a, F3b
READING OUTCOMES MODEL GRADES 3, 5, 8, 11	
CONSTRUCTING, EXAMINING, AND EXTENDING MEANING	
Students will demonstrate their ability to construct, examine, and extend meaning for a variety of texts and purposes through four reading stances: global understanding, developing interpretation, personal reflection/response, and a critical stance. Student's ability to integrate their knowledge about texts, topic familiarity, and strategic behavior will help bring about the construction, examination, and extension of meaning.	F3b

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	NCEO CODE
READ FOR LITERARY EXPERIENCE	
GLOBAL UNDERSTANDING	
Students will demonstrate their ability to develop initial understanding to a variety of texts and for different purposes.	F3b
REPRESENTATIVE INDICATORS	
Identify theme	F3b, F4b
Identify a character's or story's main problem	F3b, F4b
DEVELOPING INTERPRETATION	
Students will demonstrate their ability to develop interpretation for a variety of texts and purposes by revisiting the text to clarify, verify, and revise their understanding.	F2a, F3b
REPRESENTATIVE INDICATORS	
Identify traits of character(s)	F4b
Identify plot development	F4b
Note character change	F4b
Describe mood	F4b
Enumerate steps the character takes to solve a problem	F4b
Retell or summarize the story	F4b
Read with expression/intonation	F4b
Dramatize the story	F4b
PERSONAL REFLECTION/RESPONSE: Students will demonstrate their ability to develop personal response to the text by considering their prior knowledge and information from the text.	F3b, F4b
REPRESENTATIVE INDICATOR	
Compare/contrast with their personal views and experience the author's view of human experience and character.	F3b, F4b
CRITICAL STANCE	
Students will demonstrate their ability to develop a critical stance by identifying and analyzing the authors perspective and craft.	F2a, F4b
REPRESENTATIVE INDICATORS	
Identify and analyze the author's perspective (e.g., bias)	F2a, F4b
Analyze literary elements of the authors craft (e.g. iron, flashback, writing pattern)	F2a, F4b
Form and substantiate a qualitative judgement	F2a, F4b
READ TO BE INFORMED	
Identify an author's overall purpose/point of view	F3b
Identify the general meaning of a passage	F3b
Clarify information and concepts	F3b
Reorganize text information	F3b
Identify new information in passage	F3b
Identify and evaluate types of information that author uses	F3b
READ TO PERFORM A TASK	
Identify the overall purpose or organization of a document	F3b
Find specific information in a document	F3b
Relate graphics to text	F3b
Clarify information, steps, and/or organization	F3b
Follow directions to complete a task	F3b
Compare information in the passage with prior knowledge	F3b
Tell how information in the document relates to one's own background knowledge	F3b
Identify author's writing devices (e.g., propaganda techniques)	F3b
Judge the usefulness and clarity of the document	F2a, F3b
Give possible outcomes of directions	F2a, F3b

Maryland

	NCEO CODES
WRITING/LANGUAGE USAGE OUTCOMES	
The students will demonstrate ability to write for various audiences and to address a variety of purposes--to inform, to persuade, to express personal ideas.	F3c
The students will demonstrate ability to use appropriate style and conventions for a variety of audiences and purposes.	F3c
The students will develop as writers through frequent writing experiences and many opportunities to interact with each piece of writing, having had occasions to prewrite, draft, revise, and proofread.	F3c
The students will demonstrate ability to write effectively to inform by developing and organizing relevant information, establishing an argumentative purpose, and by designing an appropriate strategy for an identified audience. In this way, students will establish and support a meaningful position.	F3c
The students will demonstrate ability to write effectively to persuade by selecting and organizing relevant information, establishing an argumentative purpose, and by designing an appropriate strategy for an identified audience. In this way, students will create meaning using personal or fictional ideas.	F3c
The students will demonstrate ability to write effectively to express personal ideas by selecting a form and its appropriate elements (e.g., plot, dialogue, rhyme scheme, etc.) In this way, students will create meaning using personal or fictional ideas.	F3c
The students will demonstrate ability to write effectively by considering correctness, completeness, and appropriateness and by making conscious language choices that create style and tone and affect reader response. In this way, students will focus on sentence form, word choice, grammar, usage, punctuation, capitalization, and spelling.	F3c
The students will demonstrate positive attitudes toward writing.	F3c
WRITING/LANGUAGE USAGE OUTCOMES MODEL GRADES 3, 5, 8, 11	
PREWRITING	
Uses background and knowledge	F3c
Generates ideas for topics	F3c
Establishes meaning	F3c
Sets purpose	F3c
Orders ideas	F3c
Identifies audiences	F3c
Chooses form	F3c
DRAFTING	
Writes first draft for a purpose and an audience	F3c
REVISING	
Uses self, peer, and teacher input to revise	F3c
Considers changes	F3c
Considers completeness	F3c
Considers appropriateness of style	F3c
PROOFREADING	
Considers correctness	F3c
SOCIAL STUDIES OUTCOMES FOR GRADES 3, 5, AND 11	
Students will demonstrate an understanding of the historical development and present function of principles, institutions, and processes of political systems in Maryland and the United States.	F4a
Students will demonstrate an understanding of the history, diversity, an commonality of the peoples of the world, the reality of human interdependence, the need for global cooperation, and a multi-cultural perspective.	F4a
Students will demonstrate an understanding of geographic concepts and processes needed to examine the role of culture, technology, and the environment in the location and distribution of human activities.	F4a

Maryland

	NCSS CODE
Students will demonstrate an understanding of the historical development and current status of economic principles, institutions, and processes needed to be effective citizens, consumers, and workers in American society.	F4a
Students will demonstrate an ability--individually and as part of group--to gather information, think critically, and solve problems as needed to facilitate responsible decision-making, to understand complex ideas, and to generate new ideas.	F4a
Students will demonstrate attainment of a positive self-concept and empathy toward others in order to improve interaction among individuals and groups in our democratic society.	F4a, G2a, G3a, G4
Students will demonstrate attainment of understandings and attitudes needed to secure a reasoned commitment to human dignity, justice, and democratic processes.	D, E, F4a, G4
MATRIX OF INDICATORS	
POLITICAL SYSTEMS:	
Students will demonstrate an understanding of the historical development and current status of principles, institutions, and processes of political systems in Maryland and the United States.	F4a
GRADES 6-8/POLITICAL SYSTEMS	
Using historical documents such as the Mayflower Compact, the Declaration of Independence, and the U.S. Constitution, analyze the basic principles of American government.	F4a
Relate historical events and ideas of the late 18th and 19th centuries to the evolution of the American political system.	F4a
Using case studies from world cultures and American history, analyze consequences resulting from the exercise or denial of rights and/or responsibilities.	F4a
Analyze examples of ways in which individuals or groups can advance or impede political change (lobbying, voting, demonstrating, etc.)	F4a
Analyze examples from a global context in which individuals and groups brought about civic improvement.	F4a
SKILLS AND PROCESSES:	
Students will demonstrate an ability--individually and as part of a group--to gather information, think critically, and solve problems as needed to facilitate responsible decision-making, to understand complex ideas, and to generate new ideas.	F2a, F4a, G4b
GRADES 6-8/SKILLS AND PROCESSES	
Obtain, interpret, evaluate, organize, and use information from observing, investigating, listening, and reading.	F4
Obtain, interpret, evaluate organize, and use print and non-print sources of information such as maps, charts, globes, graphics, and tables.	F4a
Define and clarify problems drawn from history and the social sciences, judge information related to the problems, propose solutions, and draw conclusions based on available data.	F2a, F4a
Using decision-making models, analyze the decisions made by people in other times and places, and evaluate the consequences.	F4a
Analyze situations to determine what group action is required and demonstrate skills needed to move a group to action.	F4a
VALUING SELF AND OTHERS	
Students will demonstrate attainment of a positive self-concept and empathy toward others in order to improve interaction among individuals and groups in our democratic society.	F2a, F4a, G4b
GRADES 6-8/VALUING SELF AND OTHERS	
Examine one's own feelings, values, and capabilities in an effort to develop a positive self concept and acceptance of others.	G2a, G4b
Develop an appreciation of American society as a pluralistic one consisting of diverse cultures, customs, and traditions.	F4a

Maryland

	NCSS CODES
Using case studies, analyze the impact of social institutions and the media on the behavior of individuals and groups	F4a
UNDERSTANDING ATTITUDES	
Students will demonstrate attainment of understanding and attitudes needed to secure a reasoned commitment to human dignity, justice, and democratic processes.	F2a, F4a, G4b
GRADES 6-8/UNDERSTANDING AND ATTITUDES	
Analyze beliefs and values associated with commitment to the rule of law.	E
Using a variety of cultural and ethnic contexts, analyze situations illustrating conflicts between conscience and respect for authority.	E
Using a variety of cultural and ethnic contexts, analyze situation in which individuals demonstrate respect and support for the rights and dignity of all peoples.	E
Analyze situations from a variety of historical contexts in which respect for majority rule and rights of the individuals is demonstrated.	E, F4a
PEOPLES OF THE NATION AND WORLD	
Students will demonstrate an understanding of the history, diversity, and commonalty of the peoples of the nation and world, the reality of human interdependence, the need for global cooperation, and a multicultural perspective.	F4a
Summarize the main points of current event.	
GRADES 6-8/PEOPLES OF THE NATION AND WORLD	
Investigate and gain appreciation for various cultures throughout the world.	F4a, G4b
Examine contributions resulting from interactions among individuals and groups from various ethnic, racial, and religious backgrounds.	F4a
Perceive that human experiences, in earlier times and other places, may be applicable to solving contemporary problems.	F4a
Evaluate consequences of individual and collective decisions in promoting peace or precipitating conflict.	F4a
Provide examples of technologies, institutions, languages, and beliefs which link the different peoples of the world.	F4a
Analyze current world issues from different perspective.	F4a
GEOGRAPHY	
Students will demonstrate an understanding of geographic concepts and processes as needed to examine the role of culture, technology, and the environment in the location and distribution of human activities.	F2a, F4a, G4b
GRADES 6-8/GEOGRAPHY	
Locate places, cultural features, and natural features by interpreting and constructing maps using directions, legends, grid systems, boundary lines, scales, and political units.	F4a
Evaluate and environmental issues and recommend ways of protecting the environment while meeting human needs.	F4a
Evaluate the ways humans modify their physical setting to meet economic needs, and the resulting changes in their quality of life.	F4a
Analyze patterns of population growth and settlement in different times, cultures, and environments.	F4a
Analyze the influence of transportation and communication on the movement of people, goods, and ideas from place to place.	F4a
Compare regions on a state national, and global basis.	F4a
Analyze ways in which different cultural groups view environmental decisions.	F4a
ECONOMICS	
Students will demonstrate an understanding of the historical development and current status of economic principles, institutions, and processes needed to be effective citizens, consumers, and workers in American society.	F4a

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	NCES CODE
GRADES 6-8/ECONOMICS	
Using case studies, analyze the role of scarcity in economic decision-making.	F4a
Using case studies, cite examples of economic interdependency among world communities.	F4a
Analyze the effects of supply and demand on the production of goods and services in historical and contemporary contexts.	F4a
Relate the development and implementation of taxation to given historical and economic conditions.	F4a
Compare the economic characteristics of Maryland with those of the U.S.	F4a
Analyze the impact of technological change and resource use in promoting economic growth in the U.S.	F4a
SUGGESTED SCIENCE OUTCOMES	
Students will demonstrate their acquisition and integration of major concepts and unifying themes from the life, physical, and earth/space sciences.	F4a
Students will demonstrate the ability to interpret and explain information generated by their exploration of scientific phenomena.	F4a
Students will demonstrate positive attitudes toward science and its relevance to the individual, society, and the environment and demonstrate confidence in their ability to practice science.	F4a
Student will demonstrate the ability to employ the language, instruments, methods, and materials of science for collecting, organizing, interpreting, and communicating information.	F1, F4a
Students will demonstrate the ability to apply science in solving problems and making personal decisions about issues affecting the individual, society, and the environment.	F2a, F4a
SCIENCE OUTCOMES MODEL GRADES 3, 5, 8, 11: STUDENTS WILL DEMONSTRATE THEIR ACQUISITION AND INTEGRATION OF MAJOR CONCEPTS AND UNIFYING THEMES FROM THE **LIFE SCIENCES.**	
CURRICULUM FOCUS OF STATES SCIENCE ASSESSMENT--GR 6-8	
The life science program (6-8) includes and emphasis on investigation of the structure and function of the human body and the impact of human behavior on other living organisms and the environment.	F4a
NATURE OF SCIENCE (not grade level specific)	
Students will demonstrate the ability to interpret and explain information generated by their exploration of scientific phenomena.	F4a
HABITS OF MIND (not grade level specific)	
Students will demonstrate ways of thinking and acting inherent to the practice of science.	F4a
ATTITUDES (not grade level specific)	
Students will demonstrate positive attitudes toward science and its relevance to the individual, society, and the environment and demonstrate confidence in their ability to practices science.	F4a
SCIENCE PROCESSES (not grade level specific)	
Students will demonstrate the ability to employ the language, instruments, methods, and materials of science for collecting, organizing, interpreting and communication information.	F1, F4a
APPLICATION (not grade level specific)	
Students will demonstrate the ability to apply science in solving problems and making personal decisions about issues affection the individual, society and the environment.	F2a, F4a
STUDENTS WILL DEMONSTRATE THEIR ACQUISITION AND INTEGRATION OF MAJOR CONCEPTS AND UNIFYING THEMES FROM THE **EARTH/SPACE SCIENCES.**	

Maryland

	NCEO CODE
The earth/space science program (6-8) includes an emphasis on collection and interpretation of evidence that leads to an understanding of the processes of...	
NATURE OF SCIENCE (not grade level specific) Students will demonstrate the ability to interpret and explain information generated by their exploration of scientific phenomena	F4a
HABITS OF MIND (not grade level specific) Students will demonstrate ways of thinking and acting inherent to the practice of science.	F4a
ATTITUDES (not grade level specific) Students will demonstrate positive attitudes toward science and its relevance to the individual, society, and the environment and demonstrate confidence in their ability to practices science.	F4a
SCIENCE PROCESSES (not grade level specific) Students will demonstrate the ability to employ the language, instruments, methods, and materials of science for collecting, organizing, interpreting and communication information.	F1, F4a
APPLICATION (not grade level specific) Students will demonstrate the ability to apply science in solving problems and making personal decisions about issues affection the individual, society and the environment.	F2a, F4a
STUDENTS WILL DEMONSTRATE THEIR ACQUISITION AND INTEGRATION OF MAJOR CONCEPTS AND UNIFYING THEMES FROM THE **PHYSICAL SCIENCES**	
The physical science program (6-8) includes an emphasis on exploration of the behavior and underlying structure of matter and the interactions of matter and energy.	F4a
NATURE OF SCIENCE (not grade level specific) Students will demonstrate the ability to interpret and explain information generated by their exploration of scientific phenomena.	F4a
HABITS OF MIND (not grade level specific) Students will demonstrate ways of thinking and acting inherent to the practice of science.	F4a
ATTITUDES (not grade level specific) Students will demonstrate positive attitudes toward science and its relevance to the individual, society, and the environment and demonstrate confidence in their ability to practices science.	F4a
SCIENCE PROCESSES (not grade level specific) Students will demonstrate the ability to employ the language, instruments, methods, and materials of science for collecting, organizing, interpreting and communication information.	F4a
APPLICATION (not grade level specific) Students will demonstrate the ability to apply science in solving problems and making personal decisions about issues affection the individual, society and the environment.	F2a, F4a

Michigan

Documents Utilized

Michigan Essential Goals and Objectives for Science Education (K-12) (August, 1991)
Michigan Essential Goals and Objective for Writing (October, 1985)
Essential Goals and Objectives for Reading Education (no date)
Michigan Essential Goals and Objectives for Speaking and Listening (September, 1991)
Essential Goals and Objectives for Social Studies in Education in Michigan (August, 1992)
Essential Goals and Objectives for Computer Education (Spring, 1987)
Michigan Essential Goals and Objectives for Arts Education (K-12) (1989)
Michigan Essential Goals and Objectives for Foreign Language Education (K-12) (1991)
Michigan Essential Goals and Objectives for Mathematics Education (October, 1990)

Background

Public Act 25 of 1990 states that Michigan's core curriculum outcomes must be based upon the state's goals and objectives. Essential goals and objectives have been published for major subject areas. These publications are used by local school districts (1) as part of a core curriculum; (2) for the development of local curriculum materials, and (3) for the development of accountability measures. In December 1993, the legislature passed a law that required standards to be developed in four core subjects (English/language arts, mathematics, science, and social studies). These content standards will include benchmarks that specify what students should know and be able to do at the end of elementary, middle, and high school.

Note: Two projects, Michigan's Special Education Program Outcomes and the Outcomes Training Project, are providing educators across the State with a source for educational outcomes that are specific to the unique needs of learners with disabilities and training in their use and assessment. Student outcomes that have been specified by disability area are not included here.

Michigan

	NCEO CODE
LISTENING	
A. PERCEIVING AND DISCRIMINATING	
At the **High School, Middle/Junior High, and Elementary levels**, students will:	
Outcome 1: Distinguish between verbal and nonverbal communication.	F1a
Objective 1. Identify patterns (e.g., repetition, rhythm, rhyming) in communication.	F1a
2. Discriminate between sounds (e.g., environmental, extraneous, warning) and language.	F1a
3. Identify cultural differences in verbal and nonverbal communication.	F1a
Outcome 2: Develop an appreciation of the contribution of the listener to the communication process.	F1a
Objective 1. Recognize the implications of a commitment to be an effective listener.	F1a
2. Recognize distinctions between the physical process of hearing and the mental process of Listening.	F1a
3. Recognize the diverse roles of the listener in the communication process.	F1a
Outcome 3: Perceive emotional dimensions and aesthetic meanings through paralinguistic and Nonverbal cues.	F1a
Objective 1. Distinguish between intentional and unintentional facial expression.	F1a
2. Distinguish between intentional and unintentional bodily movement--kinesthetic cues.	F1a
3. Distinguish between intentional and unintentional vocal expression--paralinguistic cues.	F1a

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4. Distinguish between intentional and unintentional eye messages--eye contact and proximic cues.	F1a
B. ATTENDING	
At the **High School, Middle/Junior High, and Elementary levels**, students will:	
Outcome 1: Exhibit good attentive listening behavior.	F1a
Objective 1. Recognize situations which require listening.	F1a
2. Give full attention to the message (e.g., use monitoring cues to aid turn-taking).	F1a
3. Focus on a significant, single stimulus.	F1a
4. Identify internal (e.g., daydreaming) and external (e.g., faking attention) distractions.	F1a
5. Attend to visual as well as auditory cues.	F1a
Outcome 2: Apply the different functions of listening.	F1a
Objective 1. Listen to imagine.	F1a
2. Listen for information.	F1a
3. Listen to assess and evaluate.	F1a
4. Listen for pleasure.	F1a
5. Listen to discover affective messages.	F1a
Outcome 3: Recognize the different purposes of listening.	F1a
Objective 1. Recognize the discriminative purpose.	F1a
2. Recognize the comprehensive purpose.	F1a
3. Recognize the therapeutic purpose.	F1a
4. Recognize the critical purpose.	F1a
5. Recognize the appreciative purpose.	F1a
C. ASSIGNING	
At the **High School, Middle/Junior High, and Elementary levels**, students will:	
Outcome 1: Apply principles of listening to secure essential information.	F1a
Objective 1. Paraphrase an oral statement completely and accurately.	F1a
2. Retell an oral account in sequence.	F1a
3. Identify the main idea in an oral message.	F1a
4. Identify supporting detail in an oral message.	F1a
Outcome 2: Recognize organizational patterns.	F4
Objective 1. Recognize chronological patterns.	F4
2. Recognize topical patterns.	F4
3. Recognize spatial patterns.	F4
4. Recognize comparison and contrast patterns.	F4
5. Recognize problem-solution patterns.	F4
6. Recognize climactic patterns.	F4
7. Recognize organizational devices, such as transitions that help to determine meaning.	F4
Outcome 3: Comprehend spoken messages.	F1a
Objective 1. Identify the communication rituals used in everyday situations (e.g., legal, occupational, religious, social).	F1a
2. Recognize the effects of word choice (e.g., jargon, time-bound language) on comprehension.	F4
3. Develop the ability to concentrate more on content rather than presentation.	F1a, F4
4. Use verbal and nonverbal cues to determine meaning and sequence.	F1a, F4
5. Distinguish between connotative and denotative meanings.	F4
6. Compare new information to ideas and concepts retained in memory.	F4
D. EVALUATING	
At the **High School, Middle/Junior High, and Elementary levels**, students will:	
Outcome 1: Use cognitive and affective elements of the message to give meaning to the listener.	F1a, F4
Objective 1. Distinguish between fantasy and reality.	F4

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2. Distinguish between fact and opinion.	F4
3. Distinguish between literal and figurative.	F4
4. Distinguish between objective and emotional.	F4
5. Distinguish between relevant and irrelevant.	F4
6. Distinguish between complete and incomplete messages.	F4
7. Distinguish between clear and unclear messages.	F4
Outcome 2: Distinguish between valid and invalid inferences.	F2a, F4
Objective 1. Recognize the effects of propaganda techniques on meaning.	F4
E. RESPONDING	
At the **High School, Middle/Junior High, and Elementary levels**, students will:	
Outcome 1: Listen to understand the message.	F1a
Objective 1. Use intrapersonal skills to review the meaning of a message.	F1a
2. Validate understanding of the message by an objective oral synopsis of the information.	F1a
3. Recognize the effects of personal bias on meaning.	F1a, F4
Outcome 2: Promote a supportive communication environment.	F1a, G4
Objective 1. Encourage self-disclosure in others through supportive feedback.	F1a
2. Provide appropriate minimal reinforcers (e.g., head nods, "uh-huh") while receiving communication.	F1a
3. Time response to reflect a sensitivity to the communication process.	F1a
F. REMEMBERING	
At the **High School, Middle/Junior High, and Elementary levels**, students will:	
Outcome 1: Retain information in both short-term and long-term memory.	F4
Objective 1. Use notetaking techniques to record current information, to retrieve prior knowledge, and to link old information with new.	F4
2. Use semantic mapping.	F4
3. Use precise writing.	F3b
4. Use principle-fact techniques.	F4
5. Use the standard outline form in both key word and sentence form.	F4
Outcome 2: Apply memory techniques to aid retention of messages.	F4
Objective 1. Use a grouping system.	F4
2. Use an ordering system.	F4
3. Use a reordering system.	F4
4.Use mnemonic strategies.	F4
SPEAKING	
A. MESSAGES	
1. ETHICS	
At the **Middle/Junior High level**, students will:	
Outcome 1: Demonstrate an understanding of ethical communication decisions.	F4
Objective 1. Analyze the ethical use of communication in critical historical situations.	F2a, F4
2. Be able to present both sides of an issue.	F4
3. Use proper citations for information.	F4
4. Use reasoning and evidence in an ethical manner.	F4
5. Use credible sources for information.	F4
2. EVIDENCE	
At the **Middle/Junior High level**, students will:	
Outcome 1: Identify the primary options to secure evidence for communication.	F4
Objective 1. Recognize the use of personal experience or observation to support a communication.	F4
2. Recognize the use of external resources or indirect experiences to support a communication.	F4

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3. Recognize the use of experimental research to support a communication.	F4
Outcome 2: Apply common sources of evidence to support inferences in an oral communication.	F1a, F4
Objective 1. Use written resources to support a communication.	F1, F3c
2. Use interview resources to support a communication.	F1a
3. Use observation to support a communication.	F1a
4. Identify research strategies to enhance finding evidence for presentations.	F1, F4
5. Recognize essential resources to facilitate finding evidence for presentations.	F1, F4
3. REASONING	
At the **Middle/Junior High level,** students will:	
Outcome 1: Identify and apply diverse patterns of inductive and deductive reasoning.	F2a
Objective 1. Identify and apply reasoning from analogy in oral communication.	F1a, F2a
2. Identify and apply reasoning from cause in oral communication.	F1a, F2a
3. Identify and apply reasoning from sign in oral communication.	F1a, F2a
4. Identify and apply reasoning from generalization in oral communication.	F1a, F2a
4. LANGUAGE	
At the **Middle/Junior High level,** students will:	
Outcome 1: Recognize the symbolic importance of language.	F4a
Objective 1. Promote objectivity in language use through recognizing distinctions between denotative and connotative meanings in words.	F4a
2. Apply the principle that meanings vary by circumstance and interpretation.	F1a, F4a
3. Use specific language to minimize abstractions in meaning.	F1a, F4a
5. AUDIENCE ANALYSIS	
At the **Middle/ Junior High level,** students will:	
Outcome 1: Discover methods to codify the demographic characteristics of an audience.	F4
Objective 1. Analyze audiences by observing and surveying specific demographic characteristics.	F4
Outcome 2: Recognize the process of adjusting messages and/or speaking techniques to the topic and the presenter.	F1a
Objective 1. Analyze the attitude of an audience toward the topic, and how it affects communication.	F4
2. Analyze the attitude of an audience toward the presenter and how it affects communication.	F4
B. STRUCTURE	
1. ORGANIZATIONAL ANALYSIS	
At the **Middle/Junior High level,** students will:	
Outcome 1: Develop clear central ideas (propositions or theses)	F1a
Objective 1. Develop central ideas that are written in a complete, clear sentence.	F1a, F3c
2. Develop central ideas that are written to show a relationship among specific components.	F1a, F3c
3. Develop central ideas that present both sides of an issue.	F1a, F4
Outcome 2: Develop outlines for communication which distinguish general from specific concepts.	F1a, F4
Objective 1. Develop outlines that distinguish main points.	F1a, F4
2. Develop outlines that distinguish subpoints.	F1a, F4
3. Develop outlines that show support in a subordinate position to subpoints.	F1a, F4
Outcome 3: Apply patterns of organization to the specific purposes of oral communication.	F1a, F4
Objective 1. Use the chronological pattern of organization to outline a communication subject.	F1a, F4
2. Use the spatial pattern of organization to outline a communication subject.	F1a, F4
3. Use the cause-effect pattern of organization to outline a communication subject.	F1a, F4
4. Use the problem-solution patterns of organization to outline a communication subject.	F1a, F4
2. INTRODUCTIONS	
At the **Middle/Junior High level,** students will:	

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Outcome 1: Demonstrate an awareness of diverse objectives for introductions.	F1a
Objective 1. Demonstrate how an introduction to a communication can capture the attention of the audience.	F1a
2. Demonstrate how an introduction to a communication can preview the major ideas for and audience.	F1a
3. Demonstrate how an introduction to a communication can contain a central idea.	F1a
3. CONCLUSIONS	
At the **Middle/Junior High level,** students will:	
Outcome 1: Demonstrate an awareness of varied options for conclusions.	F1a
Objective 1. Demonstrate how a conclusion to communication can review the major ideas for an audience.	F1a
2. Demonstrate how a conclusion to a communication can restate the central idea for an audience.	F1a
3. Demonstrate how a conclusion can use unique appeals to retain the attention of the respondents to a communication.	F1a
C. PRESENTATION	
1. METHODS OF PRESENTATION	
At the **Middle/Junior High level,** students will:	
Outcome 1: Use a speaking style that is effective for specific communication experiences.	F1a
Objective 1. Define and explain the different speaking styles- manuscript, memorization, extemporaneous, and impromptu.	F1a
2. Demonstrate the ability to use diverse speaking styles.	F1a
2. VOCAL CHARACTERISTICS (volume, rate, pitch, articulation, pronunciation)	
At the **Middle/Junior High level,** students will:	
Outcome 1: Maximize vocal resources to enhance communication potential.	F1a
Objective 1. Develop skills of self-analysis to judge the volume, rate, and pitch.	F1a
2. Use a basic knowledge of the anatomy and physiology of the vocal mechanism to enhance the voice.	F1a
3. Explain the basic fundamentals of sound--frequency, wave length, and amplitude.	F1a
4. Explain the principles of sound--breathing, phonation, articulation, and resonance--as they relate to the vocal mechanism.	F1a
5. Demonstrate effective diaphragmatic breathing techniques.	F1a
6. Demonstrate improvement in the correct and responsible use of diction by the application of appropriate techniques.	F1a
3. NONVERBAL CHARACTERISTICS (eye contact, facial expression, posture, gestures, movement, personal appearance)	
At the **Middle/Junior High level,** students will:	
Outcome 1: Use communication strategies to facilitate the use of nonverbal characteristics.	F1
Objective 1. Demonstrate the use of appropriate nonverbal cues in a variety of communication situations.	F1
2. Develop proper posture and movement for communication.	F1
3. Demonstrate the ability to use gestures and body movements to enhance communication.	F1
4. Demonstrate effective use of eye contact in communication.	F1
5. Analyze nonverbal characteristics to enhance personal development.	F1
6. Recognize the correlation between appearance and self-image.	F4
4. AIDS TO PRESENTATION	
At the **Middle/Junior High level,** students will:	
Outcome 1: Make and use effective and appropriate audio-visual aids.	F4
Objective 1. Demonstrate the proper construction (e.g., use of color, underlining, boxes, highlighting) of visual aids to highlight ideas.	F4
2. Recognize that audiovisual aids (e.g., microphone) can be distracting if not used properly.	F4

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3. Demonstrate the ability to use audiovisual equipment (e.g., overhead projector, tape recorder, flip charts) for the purpose of aiding communication.	F1, F5a
D. FEEDBACK	
At the **Middle/Junior High level,** students will:	
Outcome 1: Use verbal communication principles to advance an understanding of a communication.	F1a
Objective 1. Use questioning principles to advance a communication relationship.	F1a
2. Use summarizing principles to advance a communication relationship.	F1a
3. Use principles of clarification to advance a communication relationship.	F1a
Outcome 2: Use oral communication to resolve problems or differences of opinion with another person.	F1a, G4c
Objective 1. Apply the principles of oral communication to conflict resolution.	F1a, G4c
Outcome 3: Provide constructive criticism of oral communication experiences.	F1a, F2a
Objective 1. Use descriptive communication, with a focus on behaviors rather than personal characteristics, to express negative feelings.	F1a, G1b
2. Evaluate criticism to understand the distinctions between constructive and destructive criticism.	F2a
Outcome 4: Demonstrate how feedback affects the various parts of a communication model.	F1
Objective 1. Recognize the distinctions in the use of feedback ion speaker-centered and audience-centered communication models.	F1
Outcome 5: Use the questioning process to advance an analysis of the message.	F1a, F2a
Objective 1. Develop clearly phrased and clearly focused questions.	F1a
2. Develop skills to provide adequate responses to inquiries.	F1a
ESSENTIAL GOALS AND OBJECTIVES FOR COMPUTER EDUCATION	
I. COMPUTING AND ITS EVOLVING ROLE IN A TECHNOLOGICAL SOCIETY, GRADES 7-9	
RATIONALE: Students need to be aware of the role of technology and its future impact on society, as well as their lives. As members of a society which utilizes technology and information processing, students also need to be cognizant of the social issues involved, their ethical obligations, and the legal responsibilities related to computer usage. By gaining a historical perspective, students will be able to identify trends in computing and formulate ideas about the future evolution and effect of the technology.	
A. History of Computers and Computing	
Goal: To understand the historical development of the computer.	F4a
Objective: The learner will:	
2. compare the different generations of computers and summarize their impact on society	F4a
3. evaluate the trends in computer development	F4a
B. Role and Impact	
Goal: To appreciate the role and impact of computers in society	F4a
Objective: The learner will:	
4. evaluate the effect computers have on society and their influence on economic issues	F4a
5. identify other technologies that interact with the computer and recognize their uses (suggested, but not limited to videodiscs, robotics, CAD/CAM systems, CD-ROM, and communication technologies.	F4a
6. identify special purpose devices and describe their unique capabilities (suggested, but not limited to communication enhancement, adaptive devices, music synthesizers, speech synthesizer, and optical scanners)	F4a
C. Social Issues	
Goal: To understand the current and emerging ethical and social issues raised by the increased use of computers.	
Objective: The learner will:	

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2. identify possible effects of the illegal use of computers	F4a
D. Future Trends	
Goal: To formulate theories about the future evolution and effect of computers and other emerging technologies.	F4a
Objective: The learner will:	
1. identify possible changes in computers and other emerging technologies and recognize the possible impact on the home and workplace.	F4a
II. COMPUTING FUNDAMENTALS, GRADES 7-9	
RATIONALE: This strand of Essential Goals and Objectives for Computer Education comprises skills and knowledge which permit the student, through actual use, to independently operate a computer system successful. It is recommended that basic skills be learned before more advanced topics and objectives are addressed.	
A. Understanding Computer Systems	
Goal: To understand the basic operation, terminology, and parts of computer systems	F5a
Objective: The learner will:	
NONE	
B. Operating Computer Systems	
Goal: To independently operate a computer system	F5a
Objective: The learner will:	
8. interpret the documentation to gain information about hardware and software products in use	F5a
9. evaluate software considering the content value and limitations	F5a
III. COMPUTER APPLICATIONS, GRADES 7-9	
RATIONALE: Students need to use application software to understand how the computer can become a tool for solving problems. By becoming proficient in using word processing, data base management, and an electronic spreadsheet and familiar with computer graphics, communications software, and computer programming, a foundation will be built for enhancing problem solving skill.	
A. Word Processing	
Goal: To understand the creation, modification, and display of text using word processing.	F5a
Objective: The learner will:	
NONE	
B. Database Management	
Goal: To understand the process of information management using a database	F5a
Objective: The learner will:	
5. design the input format and enter information into a database	F5a
6. edit the contents of the database	F5a
7. create a print format to display the data requested	F5a
8. analyze data for the purpose of developing, testing, and revising hypotheses	F2a, F5a
C. Electronic Spreadsheet	
Goal: To understand the process of numeric manipulation using an electronic spreadsheet	F5a
Objective: The learner will:	
1. answer "What if?" questions and test hypotheses with an already created spreadsheet	F5a
D. Computer Graphics	
Goal: To become familiar with computer graphics	F5a
Objective: The learner will:	
3. create a graph or chart using a prepared software package	F5a
E. Computer Communications	
Goal: To become familiar with communications between two or more computers	F5a
Objective: The learner will:	
1. explain the general purposes and several common uses of computer communications	F5a

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2. identify the types of hardware and software required for computer communications	F5a
3. explain the general method of enabling two or more individuals using computers to communicate with each other	F5a
4. list activities made possible through the use of computer communications	F4
5. indicate some of the safeguards which must be taken to protect society against misuse of computer communications	F4
F. Computer Programming	
Goal: To become familiar with programming in a computer language	F5a
Objective: The learner will:	
2. develop statements in a programming language which represent a step-by-step approach to a problem	F5a
3. enter the statements (program) into the computer	F5a
4. execute and debug the program as needed	F5a
5. validate the program by comparing the output with anticipated output	F5a
IV. COMPUTER ENHANCED PROBLEM SOLVING, GRADES 7-9	
RATIONALE: The computer can enhance the process of problem solving within the K-12 curriculum. Software designed to specifically develop problem solving skills can provide a foundation for application of these skills. The programs highlighted in the Computer Applications strand of this document are excellent tools to assist in applying these problem solving skills.	
The development and application of problem solving skills using the computer are best accomplished when students work together. Computer interaction is most effective when human interaction is emphasized and encouraged.	
A. The Computer as a Problem Solving Tool	
Goal: To understand how computer-related tools can be used in the problem solving process	F2a, F5a
Objective: The student will:	
3. discuss the intended uses of the application programs referenced in the Computer Applications strand	F5a
4. describe a specified problem and determine an appropriate application package to use in solving the problem	F5a
5. solve a given problem using an appropriate application package	F2a, F5a
MICHIGAN ESSENTIAL GOALS AND OBJECTIVES FOR ARTS EDUCATION (K-12)	
THE GOALS OF DANCE EDUCATION	
Goal I: To use dance as a vehicle for self-expression through kinesthetic, affective, cognitive, and aesthetic aspects of the movement discipline.	F4b
a. Because the self is the primary instrument of dance, the learner will become aware of the body, its range and limitations of movement: what the body can do; how the body can move; where it moves.	
b. The skills, understandings, and attitudes that students acquire through dance help them to externalize their reactions to life, foster the appreciation of beauty, challenge the intellect and broaden their social capacities.	
Goal II: To develop perceptive, imaginative, cognitive, and creative abilities through dance experiences.	F4b
a. Students of dance become acutely aware of their own ideas and feelings, developing the ability to perceive with greater sensitivity, and providing bases for making informed choices.	
b. Dance helps students use the senses to perceive abstract and concrete meanings.	

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c. Dance provides opportunities for students to engage in the process of forming their ideas, concepts and beliefs. They are encouraged to find new movements and/or to organize known movements in new ways. The student is at once both teacher and learner.	
Goal III: To understand the value of dance for the development of self concept and social awareness. a. Because dance engages the self, the learner comes to understand more about the unique physical strengths and weaknesses of his/her own body and that of others. b. Dance students learn the necessity for give and take as they communicate their ideas and work toward satisfaction in problem solving. c. The dancer learns about human interaction and seeks to understand and regard the ideas of others.	F4b, G2, G3
Goal IV: To develop respect for the originality of expression in ourselves and in response to others in nonverbal communication. a. Dance students learn to trust their own inventiveness, to take risks, accept challenges, to express and give form to feelings and ideas for the purpose of self-elucidation and to share these feelings and ideas with others. b. Dance requires the learner to bring aesthetic criteria to the evaluation and an appreciation of composition, choreography and performance.	F4b, G2a, G3a, G3b
Goal V: To foster understanding of the role of dance in our culture and in the culture of other people in an historical context. a. Students will learn about the development of dance in America by participating in dance forms indigenous to America and studying the development through both cursory and in-depth historical references. b. Students will learn about the development of dance in historical periods, the cultural influence of dance during these periods and gain knowledge of the structure and meaning of dances of other cultures through the study of and participation in a variety of dance forms. c. Students learn about other art forms and the role of the arts and humanities in the development of diverse cultures.	F4b
Goal VI: To develop internal and external skills and resources. a. Dance activities provide a natural vehicle for the externalization of knowledge and skills. The student assimilates knowledge through the processes of exploration, improvisation, problem solving, dance making, and choreography. b. Students discover new aspects of themselves and the dance experience through the developmental acquisition of skills. c. The student acquires greater knowledge of the related arts and develops the ability to draw on these resources. d. The student develops the ability to refine the intent of a creative idea.	F4b
DRAMA/THEATER EDUCATION	
I=INTRODUCTION OF SKILLS OR CONCEPTS **D=DEVELOPMENT OF SKILLS OR CONCEPTS** **R=REINFORCEMENT AND REFINEMENT**	
GOALS AND OBJECTIVES FOR DRAMA/THEATER, GRADES 7-9	
I. DEVELOP INTERNAL AND EXTERNAL PERSONAL RESOURCES	
A. Sensory and Emotional Perception	
R 1. Respond to and focus on details of sensory and emotional experiences.	F4b
D 2. Use sensory and emotional recall to develop experiences as actor and viewer.	F4b

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D	3.	Recognize individual differences in sensory perception and emotional states.	F4b
D	4.	Interpret subtleties of sensory perception and emotional states.	F4b
D	5.	Develop and use a range of techniques to understand a character as actor and/or viewer.	F4b
I	6.	Explore sensory and emotional values in theatrical design.	F4b
	B. Imagination		
R	1.	Express images through dramatic play an story telling and react to imaginary objects, environments and perceptions.	F4b
R	2.	Use imagination in playmaking.	F4b
R	3.	Use dramatic action to communicate and transform mental images.	F4b
R	4.	Use imagination to form and express thought, feeling, and character.	F4b
R	5.	Use imagination in theater production as participant and/or viewer.	F4b
	C. Movement		
R	1.	Use movement for creative expression to explore thought. feeling and roles.	F4b
R	2.	Use movement to express thought , feeling, and character.	F4b
R	3.	Identify and use movement techniques to express character.	F4b
D	4.	Recognize and use movement as an integral element of theater.	F4b
	D. Language		
R	1.	Use language for personal exploration and social interaction, and commentary on personal experience.	F4a, F4b
R	2.	Use language to discover relationships through social interaction.	F4a, F4b
D	3.	Express meaning and character through language to reveal and communicate text and context.	F4a, F4b
D	4.	Demonstrate understanding of theater language.	F4a, F4b
	E. Voice		
R	1.	Use voice as a means of self-expression.	F4b
R	2.	Use voice to explore thought, feeling, and role in dramatic activities.	F4b
R	3.	Identify and use vocal techniques to express a variety of characterizations.	F4b
D	4.	Understand and use the vocal techniques and amplification of the voice in diverse theater activities and environments	F4b
	F. Discipline		
R	1.	Demonstrate responsible behavior in a dramatic play.	D1a, F4b
R	2.	Demonstrate responsible behavior in dramatic activities.	D1a, F4b
R	3.	Demonstrate social discipline in dramatic activities.	F4b
R	4.	Develop and apply artistic discipline.	F4b
	G. Self-Concept		
R	1.	Develop self-awareness and confidence in dramatic play.	F4b, G2b
R	2.	Discover self as effective in imagining, interacting and reflecting in dramatic activities.	F4b
D	3.	Improve understanding of self and others (similarities and differences) through expanding role repertoire.	F4b, G3a, G3b
ID	4.	Develop objectivity in appraising personal abilities and creative endeavors.	F4b, G2b, G2c
II. CREATE DRAMA/THEATER THROUGH ARTISTIC COLLABORATION			
	A. Interpersonal Skills/Ensemble		
R	1.	Develop ability to join with and respond to others in dramatic activities.	F4b, G4b
R	2.	Explore behavior appropriate to the dramatic situation.	F4b, G4b
R	3.	Cooperate and interact empathetically during activities.	F4b, G3a, G4b
ID	4.	Practice the balance of personal needs with the social responsibilities and requirements of the dramatic situation.	F4b
I	5.	Explore and practice the need for ensemble in theater production.	F4b
	B. Problem Solving		
R	1.	Recognize that people in stories and life have problems.	F4b
R	2.	Explore the concept of problem and resolution, and appreciate alternative resolutions to problems in a dramatic context.	F4b

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D	3.	Explore consequences and implications of alternative resolutions to problems through enactment.	F4b
D	4.	Explore the production process as creative problem solving and evaluate consequences and implications.	F2a, F4b
D	5.	Explore the production process as creative problem solving and evaluate consequences and implications.	F2a, F4b
	C. Improvisation		
R	1.	Participate in dramatic play and improvised dramatic activities.	A2a, F4b
R	2.	Use improvisation for scripted and unscripted material.	F4b
D	3.	Recognize the use of improvisation in preparing and performing theater production.	F4b
	D. Characterization		
R	1.	Assume roles through imitation.	F4b
R	2.	Explore a variety of roles in life and fantasy situations.	F4b
R	3.	Incorporate physical, emotional, and social dimensions of roles and characters.	F4b
D	4.	Develop and use the skill of analysis in creating characters.	F4b
ID	5.	Understand and use technical elements to develop characters.	F4b
	E. Playmaking/Playwriting		
R	1.	Apply observations of and imitate life experiences and imaginary scenes in dramatic activities.	F4b
R	2.	Participate in playmaking focusing on the development and resolution of dramatic problems.	F4b
ID	3.	Write scenes in a play script format based upon problem solving improvisations.	F3c, F4b
ID	4.	Write and perform scenes/short plays integrating content and form.	F3c, F4b
	F. Directing		
D	1.	Recognize and understand the role and responsibilities of the director.	F4b
D	2.	Comprehend and respond to the directing process.	F4b
I	3.	Use the directing process.	F4b
	G. Technical Elements		
R	1.	Recognize selected aspects of the real and/or imaginary environment during dramatic play.	F4b
D	2.	Recognize and explore the effect of selected elements of technical theater in dramatic activities.	F4b
D	3.	Select elements of technical theater to enhance dramatic activities.	F4b
D	4.	Recognize the contributions of technical elements in creating theatrical effects.	F4b
ID	5.	Understand and respond to elements of technical theater as they affect the actor and viewer.	F4b
	H. Theater Management		
	1.	The student will recognize the function of management in theater production.	F4b
III. RELATE DRAMA/THEATER TO ITS SOCIAL CONTEXT			
	A. Drama/Theater and Life		
R	1.	Explore similarities and differences between life and drama/theater.	F4b
ID	2.	Reflect upon personal and universal meanings in drama/theater.	F4b
I	3.	Use life to understand theater and theater to understand life.	F4b
	B. Roles and Careers		
R	1.	Use role-playing to develop awareness of a variety of social roles and occupations.	F4b
D	2.	Explore selected occupations in theater.	A2f
	C. Theater Heritage		
R	1.	Develop awareness of historical and multicultural concepts through dramatic activities.	F4b
D	2.	Discover and explore motifs and themes in drama/theater.	F4b
I	3.	Use theater history and dramatic literature to study cultural, social, and political aspects in theater production.	F4b

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IV. FORM AESTHETIC JUDGEMENTS		
	A. Dramatic Elements	
R	1. Explore roles and environments through dramatic activities using selected dramatic elements.	F4b
R	2. Recognize, respond to, and evaluate elements in dramatic literature.	F2a, F4b
D	3. Analyze and evaluate dramatic text as a basis for theater production.	F2a, F4b
	B. Theater Attendance	
R	1. Respond to live theater.	F4b
D	2. Analyze live theater.	F2a, F4b
ID	3. Evaluate live theater.	F2a, F4b
ID	4. Expand depth and scope of aesthetic judgement by experiencing theater of diverse styles, modes and genres.	F4b
	C. Theater and Other Arts	
R	1. Experience various art forms and relate to drama/theater.	F4b
D	2. Examine relationships between theater and other arts.	F4b
ID	3. Synthesize knowledge of other arts into the creation of theater productions.	F4b
ID	4. Synthesize knowledge of other arts into the creation of theater productions.	F4b
	D. Aesthetic Response	
R	1. Recognize and respond to unique qualities of drama/theater.	F4b
R	2. Explore drama/theater in order to understand and appreciate the creative process.	F4b
ID	3. Explore drama/theater in order to respond cognitively to creative products.	F4b
ID	4. Respond affectively to theater art as a way to interpret, intensify, and ennoble human experience.	F4b
MUSIC EDUCATION		
	GENERAL OUTCOMES	
	"A music program should be designed to produce individuals who:	
1.	Are able to make music, alone and with others;	F4b
2.	Are able to improvise and create music;	F4b
3.	Are able to use the vocabulary and notation of music;	F4b
4.	Are able to respond to music aesthetically, intellectually and emotionally;	F4b
5.	Are acquainted with a variety of music including diverse musical styles and genres;	F4b
6.	Understand the role music has played and continues to play in the lives of human beings;	F4b
7.	Are able to make aesthetic judgements based on critical listening and analysis;	F4b
8.	Have developed a commitment to music;	F4b
9.	Support the musical life of the community and encourage their musical learning independently."*	F4b
	*School of Music Program: Description and Standards, Reston, VA: Music Educators' Conference, 2nd Ed., 1986, pp. 13-14.	
	MUSICAL ATTITUDES AND VALUES	
	The development of useful attitudes and values through music should happen over the entire K-12 curriculum in all courses. As the result of an education in music, students should develop the following attitudes and values:	
1.	Recognize that music plays an important part in everyday life.	F4b
2.	Recognize the interaction of music and society.	F4b
3.	Consider music as a way to interpret human experience.	F4b
4.	Recognize unique qualities inherent in musical expressions of various cultures and traditions.	F4b
5.	Make aesthetic judgements based on musical understanding.	F4b
6.	Become a more discriminating listener and make informed choices about what music to listen to or purchase.	F4b

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7.	Examine relationships between music and other arts.	F4b
8.	Seek new musical experiences and attend musical performances.	F4b
9.	Make informed judgements about music.	F4b
10.	Feel a sense of respect for music and its performance and creation.	F4b
11.	Use music as a means of personal expression through singing, playing instruments, or listening.	F4b
12.	Participate in music for enjoyment and during leisure time.	A2, F4b
13.	Seek information about music, musicians and musical activities.	F4b
14.	Involve friends and family members with music.	F4b
15.	Participate in community performing groups.	A2e, F4b
16.	Read articles, books, newspaper accounts and reviews concerning music, musicians and musical topics.	F4b
17.	Value music in the life of the individual, family, and community.	F4b
	MUSIC IN HISTORICAL, CULTURAL AND SOCIAL CONTEXTS	
	Music can represent and reflect many things about the cultural aspects of societies. Whether one examines cultures from a historical perspective or the many contemporary cultures of our present world, the student can become more sensitive to the differences and similarities of humankind through music. The learner should be aware that:	
1.	Music a part of our everyday lives and lifetime experiences.	F4b
2.	Music conveys messages and communicates ideas.	F4b
3.	Music as a universal language crosses historical, geographical and political boundaries.	F4b
4.	Music is a reflection of the nature of the culture, historical period or social context from which it comes.	F4b
5.	Music of each culture has its own set of aesthetic values.	F4b
6.	The values of a society are reflected in the musical forms created.	F4b
7.	The values of a society determine the status of its creators and performers.	F4b
8.	Musical knowledge enables the development of tolerance and respect for tradition and innovation.	F4b
9.	Composers and performers are artists creating or expressing their ideas through music.	F4b
	GOALS AND OBJECTIVES FOR VISUAL ARTS EDUCATION, GRADES 7-9	
	I=INTRODUCTION OF SKILLS OR CONCEPTS **D=DEVELOPMENT OF SKILLS OR CONCEPTS** **R=REINFORCEMENT AND REFINEMENT**	
	I. HISTORICAL, CULTURAL AND SOCIAL CONTEXTS To promote students' understanding and appreciation of artistic and cultural heritage and the role of art in contemporary society.	
	A. KNOWLEDGE	
	1. Artists and Their World	
	Students Should Know That:	
R	a. humans have always created images in the past and in the present.	F4b
R	b. the visual arts have played a role in the development of cultures throughout the world.	F4b
R	c. artists generate and express ideas according to their own experience and visions.	F4b
R	d. artists have borrowed ideas and received inspiration from works of past artists.	F4b
R	e. twentieth century artists have created art works that reflect the technology and mobility of a modern world.	F4b
D	f. art reflects, records and influences history.	F4b
D	g. artists react to trends and events within their environment.	F4b
D	h. contemporary artists have an impact on the world.	F4b

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D	i. artists have individual styles which may change over time.	F4b
	2. The Cultural Heritage	
	Students Should Know That:	
D	a. there are a variety of images and art work from contemporary, historic and prehistoric cultures.	F4b
D	b. the visual arts have played a significant role in the development of cultures throughout the world.	F4b
D	c. the needs of a culture group often determine the art works produced by the group.	F4b
D	d. works of art are often created to celebrate or commemorate important events.	F4b
R	e. artisans have often relied upon the natural environment as a source of ideas and materials.	F4b
R	f. the traditions of creating handcrafted folk art objects have been transmitted from one generation to another.	F4b
R	g. many traditionally handcrafted art forms are now mass-produced because of technological advancements.	F4b
D	h. visual symbols communicate a universal language crossing historical, geographical and political boundaries.	F4b
	3. Contemporary Social Roles	
	Students Should Know That:	
R	a. art works can be found in many places: museums, homes, public buildings, parks, films, and books etc.	F4b
D	b. artistic people contribute to our society through careers as artists, in advertising, the media, product design, architectural construction, environmental design, landscaping and in numerous other professions.	F4b
R	c. popular art forms (cartoons, films, record album covers, posters, etc.) attempt to appeal to a wide segment of society.	F4b
R	d. the visual arts are interrelated to other areas of the school curriculum.	F4b
D	e. trademarks, brand names, color and shape coding, and other visual symbols are used to convey messages and communicated ideas.	F4b
D	f. architecture and environmental design are related to the lifestyles of people.	F4b
D	g. art work reflects the time, technology and skills of a society	F4b
	B. PERCEPTUAL, INTELLECTUAL AND PHYSICAL SKILLS	
	1. Artists and Their World	
	Students Should Be Able To:	
R	a. recognize works of individual artists.	F4b
R	b. classify art work according to subjects. (i.e. landscape, portrait, etc.)	F4b
R	c. classify art works illustrating specific forms of expression (i.e., photography, graphics, painting, sculpture).	F4b
D	d. describe the characteristics of a still life, a portrait, a self-portrait, a landscape, a cityscape.	F4b
D	e. classify art works according to styles (expressionistic, realistic, surrealistic, etc.)	F4b
D	f. recognize recurrent themes in art such as: birth, marriage, death, victory, defeat, love, etc.	F4b
I	g. distinguish the differences between art works that are whimsical, analytical, factual, spiritual, or allegorical when similar subject matter is portrayed.	F4b
I	h. identify art works from various periods of history.	F4b
I	i. recognize that an artist's work can reflect a transition or evolution of style or form.	F4b
	2. The Cultural Heritage	
	Students Should Be Able To:	
R	a. identify the purpose of an art object.	F4b
R	b. identify some of the symbols that different cultures use to convey common themes.	F4b
D	c. identify themes from selected works of art from various cultures or groups.	F4b
D	d. identify the design sources used in the decoration of handcrafted art objects.	F4b
D	e. recognize the similarities and differences between art works of various cultures.	F4b

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D	f. compare the media used in art works from different cultures.	F4b
I	g. identify factors which have influenced the production of art works from a particular culture.	F4b
I	h. explain contemporary style trends in art as reflections of diverse developments in a culture.	F4b
	3. Contemporary Social Roles	
	Students Should Be Able To:	
R	a. recognize and describe the role of artists within a community.	F4b
R	b. recognize and describe ways that people are involved in the visual arts within the community.	F4b
R	c. identify symbols, trademarks, emblems, insignia and other visual motifs that are used to identify people's occupations, authority, or interests.	F4b
D	d. identify uses of the visual arts in business and industry, including architectural and commercial design, advertising, television, film, and art careers associated with all of these forms.	F4b
D	e. identify art works that are displayed in their community.	F4b
D	f. recognize "sculptural" art forms created for functional purposes, such as bridges, playgrounds, drinking fountains.	F4b
D	g. recognize the differences and similarities between popular art forms and fine art forms.	F4b
	C. AFFECTIVE EXPERIENCES: ATTITUDES AND VALUES	
	1. Artists And Their World	
R	a. an awareness that artists generate and/or express ideas according to their own personalities and experiences.	F4b
R	b. an appreciation of the aesthetic values of others.	F4b, G3a
R	c. an emotional awareness and response to the sensory qualities in an artist's work.	F4b
R	d. a sensitivity to the expressive qualities in an artist's work.	F4b
R	e. a desire to communicate one's own aesthetic values when viewing an artist's work.	F4b
D	f. the ability to appreciate a wide variety of different artist's works.	F4b
D	g. the ability to define personal preferences in artists works, recognizing the influence of personal beliefs, attitudes and ideas.	F4b
	2. The Cultural Heritage	
	Students Should Develop:	
R	a. an awareness that all people regardless of when they live, have emotional needs to visually express themselves.	F4b
R	b. an appreciation of the art forms from different cultures.	F4b
D	c. a sensitivity to the idea that cultural groups use a universal language to communicate beliefs and aesthetic values in visual form.	F4b
I	d. the ability to examine the value that people of different cultures place on tradition and innovation.	F4b
I	e. the perception that there is a relationship between individual beliefs and a culture's values when defining personal preferences in art works.	F4b
	3. Contemporary Social Roles	
	Students Should Develop:	
R	a. an awareness that learning about the visual arts is an integral part of the educational process.	F4b
R	b. an awareness of how the values of society are expressed in the art forms created.	F4b
D	c. sensitivity to the relationship between different cultural forms of artistic expression, such as; body painting, tattoos, masks, cave drawings, and graffiti.	F4b
D	d. the ability to compare the qualities of objects that were produced for the same function.	F4b
D	e. the ability to analyze the psychological appeal of advertising.	F4b
D	f. the ability to recognize that the values of society determine the status of its artists and artisans.	F4b
I	g. the perception that social trends influence our emotional reactions while observing	F4b

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	art works.	
I	h. concern for the issues of censorship and the uses of art for propaganda.	F4b
	II. CREATING ART AND THE ART PRODUCTION PROCESS	
	To provide expressive and creative opportunities for experiences with art tools and materials in a sequential process acknowledging the schematic development of the student.	
	A. KNOWLEDGE	
	1. Vocabulary	
	Students Should Know:	
R	a. vocabulary related to technical processes.	F4b
R	b. vocabulary related to medium/media	F4b
R	c. vocabulary related to composition.	F4b
R	d. vocabulary related to tools and equipment.	F4b
R	e. vocabulary related to design elements and concepts.	F4b
R	f. vocabulary related to forms of expression.	F4b
	2. Media and Materials	
	Students Should Experience:	
D	a. painting	F4b
D	b. drawing	F4b
D	c. print making.	F4b
D	d. mixed media and fibers.	F4b
D	e. ceramics.	F4b
D	f. sculpture	F4b
D	g. computers and electronic media	F4b
I	h. jewelry/metal work	F4b
I	i. photography and video.	F4b
I	j. lettering and calligraphy	F4b
	3. Conceptual Strategies	
	Students Should Know That:	
R	a. composition is an orderly and planned arrangement of the elements and principles of art.	F4b
	b. the process artists use to make art by conceiving an idea, elaborating and refining, and finally giving form with art materials and mediums.	F4b
R	c. the creating of art forms can stem from spontaneous expression based on prior knowledge and experience.	F4b
R	d. the art medium can serve as a source of inspiration for creative expression.	F4b
R	e. ideas can be developed from imagination, dreams and fantasies.	F4b
R	f. ideas can be developed from viewing other artist's works, trends or events in our society, nature or man made environments.	F4b
R	g. the use of natural and artificial light and its effect on composition.	F4b
D	h. concepts and ideas can be developed by creative processes such as brainstorming, thumbnail sketches, etc.	F4b
D	i. sequential planning may be necessary for the production of complex art forms.	F4b
	B. PERCEPTUAL, INTELLECTUAL AND PHYSICAL SKILLS	
	1. Imaginative and Creative Skills	
	Students Should Be Able To:	
R	a. conceive, elaborate and refine new ideas.	F4b
R	b. develop ideas from imagination and other visual inspiration.	F4b
R	c. be aware of the differences between looking at something and truly seeing it.	F4b
R	d. commit time and effort to fully develop an idea.	F4b
D	e. use a variety of processes to stimulate creative ideas, i.e., creative problem solving techniques.	F2a, F4b

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D	f. utilize current events and the environment for inspiration.	F4b
D	g. manipulate the media, format, light and subject to convey varied personal interpretations	F4b
D	h. defer judgement as a way to be receptive to a new idea.	F4b
D	i. recognize and articulate the interrelationships between the elements and principals of design.	F4b
D	j. apply the elements and principles of design in creative and unique ways to solve or resolve visual problems.	F2a, F4b
	2. Use and Care of Equipment	
	Students Should Be Able To:	
R	a. clean and care for basic art tools and materials.	D3, F4b
R	b. demonstrate the ability to use a variety of basic art tools in a safe and appropriate manner.	C2a, F4b
D	c. demonstrate the ability to safely use a variety of general hand tools: i.e., pliers, file, wire cutter.	C2a, F4b
D	d. demonstrate skill with sharpened tools: i.e., linoleum cutter, stencil knife, X-acto, matte knife.	C2a, F4b
ID	e. use power tools safely and appropriately.	C2a, F4b
	3. Application of Technical Skills	
	Students Should Be Able To:	
	a. demonstrate painting skills	
	1. using and mixing colors: primary, secondary, warm/cool, light/dark, etc.	F4b
R	2. using a variety of tools, i.e., sponges, brushes	F4b
R	3. using a variety of media, i.e., finger paint, tempera, watercolor	F4b
R	4. developing painting techniques, i.e., wet brush, dry brush.	F4b
D	5. varying color applications, i.e., tint, tone, shade	F4b
D	6. using advanced color schemes, i.e., complementary, monochromatic, analogous, neutrals.	F4b
D	7. using framing practices, i.e., matting and mounting	F4b
I	8. using advanced painting media, i.e., acrylics and oils, guache.	F4b
	b. demonstrate drawing skills by:	
R	1. using basic shapes and apparent form in an art work	F4b
R	2. making a variety of shapes, "abstract and representational."	F4b
R	3. drawing from direct observation	F4b
R	4. composing art work using a variety of lines, i.e., thick, thin, broken, curved, slanted, etc.	F4b
R	5. creating tactile and apparent textures.	F4b
D	6. the use of spatial relationships, i.e., depth, areas, size relationship, overlap, foreground, middle-ground, background.	F4b
D	7. utilizing both positive and negative space in composition.	F4b
D	8. creating patterns with lines, shapes and textures	F4b
D	9. exhibiting understanding of physical proportions	F4b
D	10. drawing in one- and two-point perspectives	F4b
D	11. using techniques for enlargement and reduction (grid system)	F4b
D	12. creating symmetrically/asymmetrically balanced composition	F4b
D	13. using concepts of composition, i.e., center of interest, point of view, eye path.	F4b
D	14. creating contour and gesture drawings	F4b
D	15. using techniques as varied line, texture, and shading to show implied light and value, i.e. cross hatching or stippling.	F4b
	c. demonstrate printmaking skills by:	
R	1. learning basic relief print making techniques	F4b
R	2. learning incised printing processes: styrofoam or found objects.	F4b
D	3. using stencil processes	F4b
D	4. developing multiple color print making processes involving registration techniques, i.e., etching, lithography, silkscreen.	F4b

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I	5. using advanced print making techniques , i.e., etching, lithography, silkscreen	F4b
	d. demonstrate skills in mixed media and fibers by:	
R	1. creating 3-D objects from paper, i.e., folding tearing	F4b
R	2. composing an art product using mixed media or found objects.	F4b
R	3. creating collages, assemblages, handmade paper, weavings	F4b
D	4. using basic stitchery procedures, i.e., running stitch, cross stitch, couching	F4b
D	5. doing simple macramé knots	F4b
D	6. using advanced stitchery, i.e., satin, chain, French knot.	F4b
D	7. weaving on a simple loom	F4b
D	8. using basic batik and tie-die methods	F4b
D	9. using basic basketry techniques (wrapping)	F4b
I	10.using textile decoration methods, i.e., paint on silk, silk-screen, bleachout-reverse batik	F4b
	e. demonstrate ceramics skills by:	
R	1. the pinch/pull method of construction	F4b
R	2. the coil/slab method of construction	F4b
D	3. using a potters wheel, modeling and slip casting	F4b
I	4. the safe uses of glazes, using stains and colorants	F4b
I	5. assisting in stacking and firing a kiln	F4b
	f. demonstrate sculptural skills by:	
R	1. assembling rigid materials by stacking, hammering gluing, i.e., wood, cardboard, styrofoam	F4b
D	2. creating mobiles, stabiles and other contemporary forms of sculptural expression, i.e. environmental, wrapping, etc.	F4b
D	3. creating relief sculpture, i.e., sand casting, curved clay form	F4b
I	4. making an armature out of wire, wood, paper	F4b
I	5. using advanced sculpture techniques, i.e., molds, casting, welding, etc.	F4b
	g. demonstrate skills using computers and electronic media by:	
D	1. recognizing that art work can be created using computers and other electronic media	F4b
D	2. reproducing and manipulating images using electronic media	F4b
	h. demonstrate skill in jewelry/metalwork by:	
R	1. stringing beads, seeds, or found objects	F4b
R	2. making jewelry with dough, papiér maché or clay	F4b
D	3. bending and twisting wire into wearable art	F4b
D	4. using repoussé techniques in flat metal	F4b
I	5. using basic metal working techniques: i.e., cutting, sawing, hammering, soldering, filing, drilling, enameling	F4b
I	6. using advanced jewelry techniques, i.e., casting, cloisonné, forming metal, etc.	F4b
	i. demonstrate photographic/video skills by:	
D	1. using simple photography techniques, i.e., sun prints, drawing on slides, pinhole cameras, experimental	F4b
D	2. using simple animation, i.e. flip book	F4b
I	3. using a camera to frame and record an image	F4b
I	4. developing film--various types	F4b
I	5. utilizing video equipment to create an art form	F4b
I	6. using splicing and editing equipment and techniques	F4b
	j. demonstrate lettering/calligraphy skills by:	
D	1. drawing and cutting uniform letters	F4b
R	2. using various calligraphy styles, i.e., Gothic, Roman, Chancery cursive, Text	F4b
D	3. developing creative lettering designs	F4b
D	4. utilizing advanced techniques of lettering, i.e., decorative, illuminated, etc.	F4b
	C. AFFECTIVE EXPERIENCE: ATTITUDES AND VALUES	
	Students Should:	
R	1. Develop an inquisitive mind	F4

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R	2.	Demonstrate confidence and satisfaction in his/her achievements	G2b
R	3.	Value his/her capabilities and creative potential	G2
R	4.	Develop a respect and appreciation for the ideas and creations of others	G3a
R	5.	Increase awareness of the creative process and multitude of choices available	F4
R	6.	Develop an awareness of the barriers that inhibit or prohibit creative thought	F4
R	7.	Develop the desire to complete a project as specified	D3c
R	8.	Demonstrate a willingness to improve art skills	F4
D	9.	Consider the cause and effect of media/material choices	F4b
D	10.	Develop a respect for the aesthetic dimensions of art	F4b
		III. ART ANALYSIS/CRITICISM	
		Through talking and writing about art in structure ways that are developmentally appropriate for the student, the learner will gain the ability to observe, describe, analyze, interpret, and make critical judgements about the form and content of art.	
		A. KNOWLEDGE	
		Students Should Know:	
R	1.	**Vocabulary:** Students should learn and use words whose meanings relate to or describe a process, characteristics or traits intrinsic to works of art	F4b
R	2.	**Strategies:** Students should gather information in order to recognize, identify and classify works of art.	F4b
		B. PERCEPTUAL, INTELLECTUAL AND PHYSICAL SKILLS	
	1.	**Describe A Work of Art**	
		Students should be able to:	
R		a. identify objects represented in a work of art	F4b
R		b. identify parts, forms, shapes, colors, lines, textures in a work of art.	F4b
D		c. identify symbolism, periods, artist's intent, style, cultures.	F4b
	2.	**Analyze A Work of Art**	
		Students should be able to:	
R		a. use vocabulary to identify or describe an artwork	F4b
R		b. discern how and where the formal elements are used by the artist	F4b
D		c. identify style, periods, media, cultures in works of art.	F4b
		C. AFFECTIVE EXPERIENCE: ATTITUDES AND VALUES	
	1.	**Interpretation of an Art Work**	
		Students should be able to:	
R		a. discuss visual perception about works of art	F4b
R		b. discuss feelings expressed in a work of art	F4b
R		c. discuss the artist's use of media, subject matter or theme in expressing intent	F4b
D		d. interpret the use of symbols in works of art	F4b
D		e. determine the presence of meaning in a work of art.	F4b
	2.	**Judgement**	
		Students should be able to:	
R		a. look at works of art and discern how it makes the viewer feel and why	F4b
D		b. combine knowledge and skills to evaluate works of art	F4b
D		c. compare and contrasts the relationship of social and cultural influences on works of art	F4b
D		d. consider the importance of works of art to society, careers and history	F4b
I		e. explain the work of art using analytical description, being aware of fallacies and prejudices that people bring to a work of art.	F4b
I		f. determine artistic merit of any work based on art rules, historical influences and personal experience.	F4b

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			NCEO CODE
IV.		**AESTHETICS: A PHILOSOPHICAL BASIS FOR ART** An understanding of the nature, meaning and value of art is an important component of art education. The discussion of these philosophical questions sets art apart from the other areas of the curriculum.	
		A. KNOWLEDGE: DEFINING PROPERTIES OF AESTHETICS Students should know that:	
R	1.	Aesthetics is a branch of philosophy which deals with questions about the nature, meaning and value of art.	F4b
R	2.	The ability to perceive and respond to art is unique to human beings	F4b
R	3.	Aesthetics is an attempt to explain the reasons why we find certain experiences and objects perceptually interesting and attractive.	F4b
R	4.	One's concept of beauty may be different from another individual's concept of beauty.	F4b
R	5.	Concepts of beauty may differ from culture to culture	F4b
D	6.	Our aesthetic response is dependent upon the quality of our sensory perceptions	F4b
D	7.	Our aesthetic is an attempt to articulate why some experiences and objects are valued for their own sake rather than as means to other ends.	F4b
D	8.	Aesthetics is an attempt to articulate why some experiences and objects are valued for their own sake rather than as means to other ends.	F4b
I	9.	Aesthetics is a critical reflection on the experience and evaluation of art	F4b
I	10.	Philosophical inquiry in aesthetics involves weighing sometimes competing and a possibly incompatible ideas about art to achieve some coherent viewpoint	F4b
		B. PERCEPTUAL, INTELLECTUAL AND PHYSICAL SKILLS Students should develop the ability to:	
R	1.	Observe and recall detail related to artistic experience	F4b
R	2.	Make discriminations of sensory qualities, i.e., variations in patterns, surface, color form, etc.	F4b
R	3.	Be receptive to new ideas	F4b, G
R	4.	Adapt to new situations	F4b
R	5.	Speculate	F4b
D	6.	Analyze the parts for a better perception of the whole	F2a, F4b
D	7.	Perceive events and objects holistically	F4b
D	8.	Communicate using appropriate vocabulary fro responding to the aesthetic qualities of a work of art.	F1, F4b
D	9.	Classify, sequence, compare and contrast aesthetic qualities	F4b
D	10.	Distinguish descriptive words from evaluative words	F4b
D	11.	Distinguish opinions from logical arguments, and objective statements from subjective statements	F4b
D	12.	Discuss and consider the relationship of the values of the culture to the values of the artist and the individual	F4b
		C. AFFECTIVE EXPERIENCE: ATTITUDES AND VALUES	
R	1.	Be curious and develop a sense of wonder	no match
R	2.	Value questions as well as answers	F4
R	3.	Become more open to and aware of sensory qualities in works of art or in natural events	F4b
R	4.	Develop an awareness of the use of metaphors and symbols that relate to universal human themes	F4b
R	5.	Become more discriminating of and less satisfied with stereotypical images	F4b
D	6.	Tolerate ambiguity and uncertainty	F4b
D	7.	Become aware of assumptions and their effect on literal and visual phenomena	F4b
D	8.	Value the presence of many possibilities and options	F4b
D	9.	Value differences in viewpoints and reflective disagreement	F4b, G3
D	10.	Seek the basis or experiential reasons for their attitudes and beliefs	F2a, F4b

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ESSENTIAL GOALS AND OBJECTIVES FOR WRITING	NCEO CODE
OBJECTIVES FOR USING THE WRITING PROCESS	
PRE-WRITING	
Objectives: During the pre-writing part of the writing process, the student will:	
read	F3b, F3c
draw	F3c, F4b
speak	F1a, F3c
listen	F1a, F3c
dramatize	F3c, F4b
brainstorm	F3c, F4
interview	F3c, F4
recall	F3c, F4
research	F3c, F4
classify	F3c, F4
imagine and visualize	F3c, F4
DRAFTING	
Objectives: During the drafting part of the process, students will:	
choose a topic	D3e, F3c
use invented spellings	F3c
record experiences, feelings, and ideas on paper	F3c
restart	F3c
add or delete ideas	F3c
create images	F3c
connect ideas	F3c
consider audience and format	F3c
share writing with others	F3c
continue reading and researching	
REVISING	
Objectives: When revising, the student will	
add and delete information	F3c
seek help	F3c
refine purpose	F3c
share writing orally with peers	F1a, F3c
consider arrangement of sentences and paragraphs	F3c
select precise language	F3c
use a personal dictionary or thesaurus	F3c
evaluate what was written	F2a, F3c
project audience reaction	F3c
PROOFREADING	
Objectives: When proofreading, the student will:	
correct sentence fragments and run-on sentences	F3c
correct sentence syntax errors	F3c
correct errors in usage, such as lack of subject-verb agreement, incorrect verb tense, and so on	F3c
correct punctuation and capitalization	F3c
correct illegible handwriting	F3c
correct format problems, such as irregular margins, missing indentations, and so on	F3c
identify and correct misspelled words	F3c
PUBLISHING	
Objectives: After proofreading, a student will:	
prepare corrected copy for publication	F3c
add illustrations, if possible	F3c
share writing with appropriate audiences	F3c

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	NCEO CODE
display writing in the classroom or school building	F3c
seek ways to share writing with parents	F3c
enjoy the published writing of classmates	F3c
ESSENTIAL GOALS AND OBJECTIVES FOR FOREIGN LANGUAGE EDUCATION, GRADES K-12	
PHASE II: During this phase, which may encompass three years at the upper elementary grades or two years at the junior high, emphasis remains on developing listening and speaking skills, but time spent on reading and writing in the foreign language increases. Students begin to develop an awareness of grammatical structures, but formal grammar instruction is kept to a minimum.	
During This Phase, Students Will:	
Give more extended personal information (such as date of birth) and personal information about others.	F4a
Respond to visual cues dealing with school, home, city/community, sports, action words, foods.	F4a
Make simple inquiries orally to seek information, meet needs or initiate a conversation.	F4a
Begin to create with the language to express personal thoughts or needs on simple, familiar topics.	F4a
Learn sounds/symbol correspondences of foreign language.	F4a
Read stories and other texts for (cultural) information.	F4a
Write simple sentences in response to structured questions, to describe objects or people and for self-expression.	F4a
PHASE III: This phase follows an articulated K-6 elementary program. Taught in the junior high, students are expected to develop proficiency in each of the four language skills.	
During This Phase, Students Will:	
Learn about the language (grammar) and culture entirely through the medium of the foreign language.	F4a
Learn to address individuals in the correct social register.	F4a
Recount a sequence of events in the present and past tenses, orally and in writing.	F4a
Read and listen to authentic "texts" for information about history, geography and other aspects of the target culture(s).	F1a, F4a
Increase the ability to create with the language to express ideas and needs, orally and in writing.	F1a, F3c, F4a
THE ESSENTIAL OBJECTIVES FOR READING EDUCATION--3RD GRADE	
I. CONSTRUCTING MEANING	
A. INTERACTIVE READING	
1. ability to construct meaning under a variety of different reader, text, and contextual conditions.	F3b
a. ability to identify and use text factors (i.e., text types, structures, and features) as an aid in constructing meaning	F3b
b. ability to select, employ, monitor, and regulate appropriate strategies under varying reader, text, contextual conditions	F3b
c. ability to read in a fluent manner, e.g., phrasing, automacity	F3b
d. ability to integrate textual information within sentences, within a whole text, with information outside the text and with information from the reader's knowledge.	F3b
B. SKILLS FOR CONSTRUCTING MEANING	
1. ability to use a variety of strategies to recognize words, e.g., predictions context clues, phonics, and structural analysis	F3b
2. ability to use contextual clues to aid vocabulary and concept development	F3b
3. ability to recall/recognize text based information	F3b
4. ability to integrate information with a text	F3b

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	NCEO CODE
5. ability to integrate information from more than one text	F3b
6. ability to evaluate and react critically to what has been read	F2a, F3b
7. ability to construct a statement of a central purpose or theme	F3b
8. ability to identify major ideas/events and supporting information within and across texts	F3b
II. KNOWLEDGE ABOUT READING	
A. GOALS AND PURPOSES	
1. knowing that the goal of reading is constructing meaning	F3b
a. knowing that reading skills are tools for achieving the goal of constructing meaning	F3b
2. knowing that reading is communication	F3b
a. knowing that what is read was written by someone who was trying to say something	F3b
b. knowing that authors have different intentions and knowing what they are, e.g., entertain, persuade, inform	F3b
c. knowing that the reader's adopted purpose(s) influence(s) comprehension	F3b
d. knowing that social context influences reading, e.g., peers, home, subculture	F3b
B. READER--TEXT--CONTEXTUAL FACTORS THAT INFLUENCE READING	
1. knowing about READER characteristics, e.g., prior knowledge, purpose, interest, attitudes, word recognition and comprehension strategies.	F3b
2. knowing about TEXT factors	F3b
a. knowing about how different text structures, e.g., essays, editorials, history, government, ecology, biology	F3b
b. knowing about how different text structures, influence reading, e.g., problem solution, superordinate/subordinate	F3b
c. knowing about how different text features influence reading, e.g., graphs, marginal notations, imagery, flashback	F3b
3. knowing about CONTEXTUAL FACTORS	F3b
a. knowing about how different settings influence reading, e.g., library, club meetings, workplace	F3b
b. knowing about how different reading tasks, influence reading, e.g., library research, test preparation, lab reports	F3b
4. knowing how READER, TEXT, and CONTEXTUAL factors interact to influence reading	F3b
C. STRATEGIES	
1. knowing about a variety of strategies for identifying words, e.g., predictions, context clues, phonics, and structural analysis	F3b
2. knowing about a variety of strategies to aid comprehension, e.g., notetaking, conceptual mapping, memorizing	F3b
3. knowing when and why to use certain word recognition and comprehension strategies	F3b
4. knowing that it is important to monitor and regulate comprehension	F3b
5. knowing that strategies are employed flexibly, i.e., they are differentiated by reader, text, contextual factors	F3b
III. ATTITUDES AND SELF-PERCEPTIONS	
A. Developing a positive attitude toward reading	F3b, G2b
B. Choosing to read often in their free time both at home and in school	F3b
C. Choosing to read a variety of materials for a variety of purposes	F3b
D. Developing an understanding of their competencies and limitations in reading	F3b, G2b, G2c
E. Developing a positive attitude (image) toward themselves as readers	F3b, G2a, G2b
ESSENTIAL GOALS AND OBJECTIVES FOR MATHEMATICS EDUCATION, GRADES 4-6	
WHOLE NUMBERS AND NUMERATION	
II. ADDITION	
To add whole numbers using manipulative models and computational algorithms	F3a

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	NCEO CODE
D. Estimation	
1. To estimate the sum of two, three or more numbers.	F3a
IV. MULTIPLICATION	
B. Mental Arithmetic	
3. To multiply one-digit and two-digit numbers and find other appropriate special products mentally.	F3a
VI. NUMBER PROPERTIES	
To recognize and use properties of whole numbers.	F3a
A. Conceptualization	
1. To demonstrate and use the meaning of:	F3a
d. prime number and prime factorization	F3a
e. and scientific notation	F3a
B. Computation	
8. To express whole numbers in scientific notation, and conversely.	F3a
FRACTIONS, DECIMALS, RATIO AND PERCENT	
FRACTIONS (Note: Fractions include mixed numbers and whole numbers where appropriate)	
I. MEANING	
To demonstrate and use the meaning of fractions.	F3a
A. Conceptualization	
1. To relate fractions to concrete models.	F3a
2. To relate fractions to division using the necessary vocabulary.	F3a
B. Estimation	
1. To estimate fractions and sizes of regions using easily recognized fractions.	F3a
C. Problem Solving And Applications	
1. To solve problems involving the meaning of fractions.	F2a, F3a
II. EQUIVALENT FRACTIONS	
To find equivalent fractions using concrete models and generalizations for equivalent fractions	F3a
A. Conceptualization	
1. To relate concrete models and equivalent fractions.	F3a
B. Mental Arithmetic	
1. To find equivalent fractions for easily recognized fractions.	F3a
C. Estimation	
1. To estimate fractions using easily recognized fractions.	F3a
D. Computation	
1. To find equivalent fractions and mixed number/fraction equivalents.	F3a
E. Problem Solving And Applications	
1. To solve problems with equivalent fractions	F2a, F3a
III. COMPARE/ORDER	
To compare and order fractions.	F3a
A. Conceptualization	
1. To compare and order using models and appropriate fractions.	F3a
B. Estimation	
1. To estimate fractions using easily recognized fractions.	F3a
C. Computation	
1. To compare and order fractions.	F3a
D. Calculators	
1. To compare and order fractions using decimal equivalents.	F3a, F5a
E. Problem Solving And Applications	
1. To solve problems involving comparing or ordering fractions.	F2a, F3a

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	NCEO CODE
IV. ADD/SUBTRACT	
To add and subtract fractions including combinations with whole numbers.	F3a
A. Conceptualization	
1. To relate the addition and subtraction operations to models and to each other.	F3a
B. Mental Arithmetic	
1. To find sums or differences of like fractions mentally.	F3a
C. Estimation	
1. To estimate sums and differences.	F3a
D. Computation	
1. To find sums or differences.	F3a
E. Problem Solving And Applications	
1. To solve problems involving addition and subtraction with fractions.	F2a, F3a
V. MULTIPLY/DIVIDE	
To multiply and divide fractions including combinations with whole numbers.	F3a
A. Conceptualization	
1. To relate the multiplication and division operations to models and to each other.	F3a
B. Mental Arithmetic	
1. To find a fractional part of appropriate whole numbers mentally.	F3a
C. Estimation	
1. To estimate products and quotients.	F3a
D. Computation	
1. To find products and quotients.	F3a
E. Problem Solving And Applications	
1. To solve problems involving multiplication and division with fractions.	F2a, F3a
DECIMALS	
I. MEANING	
To demonstrate and use the meaning of decimals.	F3a
A. Conceptualization	
1. To relate decimals to models.	F3a
2. To use place value and to read and write decimals to thousandths.	F3a
B. Estimation	
1. To estimate decimals using whole numbers and models	F3a
2. To round decimals to a given place.	F3a
C. Problem Solving and Applications	
1. To solve problems involving the meaning of decimals.	F2a, F3a
II. EQUIVALENT DECIMALS	
To find equivalent decimals using models and generalizations for equivalent decimals.	F3a
A. Conceptualization	
1. To identify equivalent decimals using models and generalizations for equivalent decimals.	F3a
B. Estimation	
1. To use equivalent decimals to make estimates using models or using decimals.	F3a
C. Problem Solving and Applications	
1. To solve problems with equivalent decimals.	F2a, F3a
D. Calculators	
1. To interpret calculator displays for decimal equivalents.	F3a, F5a
III. COMPARE/ORDER	
To compare and order decimals.	F3a
B. Estimation	
1. To estimate decimals using easily recognized fractions.	F3a
C. Problem Solving and Applications	
1. To solve problems involving comparing or ordering of decimals.	F2a, F3a

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	NCEO CODE
IV. ADD/SUBTRACT	
To add and subtract decimals.	F3a
A. Conceptualization	
1. To relate the addition and subtraction operations to models and to each other.	F3a
B. Mental Arithmetic	
1. To add and subtract selected decimals mentally.	F3a
C. Estimation	
1. To estimate sums and differences.	F3a
D. Computation	
1. To add and subtract decimals.	F3a
E. Problem Solving and Applications	
1. To solve problems involving addition and subtraction of decimals.	F2a, F3a
F. Calculators	
1. To add and subtract decimals.	F3a, F5a
V. MULTIPLY/DIVIDE	
To multiply and divide decimals.	F3a
A. Conceptualization	
1. To relate the multiplication and division operations to models and to each other.	F3a
2. To relate equivalent expressions for the operations, including multiplication of a whole number and a decimal.	F3a
B. Mental Arithmetic	
1. To multiply and divide with decimals and powers of ten.	F3a
C. Estimation	
1. To estimate products and quotients.	F3a
E. Calculators	
1. To find products and quotients.	F3a, F5a
F. Problem Solving and Applications	
1. To solve problems involving multiplication and division of decimals.	F2a, F3a
RATIO AND PROPORTION	
I. RATIO	
To use ratio in practical situations.	F3a
A. Conceptualization	
1. To determine ratios from models that are part-to-part, part-to-whole, or rates and recognize verbal expressions for ratio.	F3a
B. Problem Solving And Applications	
1. To solve problems involving ratios.	F2a, F3a
II. EQUIVALENT RATIOS/PROPORTION	
To identify and find equivalent ratios.	F3a
A. Conceptualization	
1. To demonstrate the meaning of equivalent ratios using models or practical situations.	F3a
B. Problem Solving	
1. To solve problems involving ratios.	F2a, F3a
III. EQUIVALENT RATIOS/PROPORTION	
To identify and find equivalent ratios.	F3a
A. Conceptualization	
1. To demonstrate the meaning of equivalent ratios using models or practical situations.	F3a
B. Computation	
1. To find equivalent ratios and solve proportions.	F3a
C. Problem Solving And Applications	
1. To solve proportion problems.	F2a, F3a

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	NCEO CODE
D. Calculators	
1. To solve proportions with larger numbers and proportion problems with more difficult computation.	F3a, F5a
PERCENT	
I. MEANING	
To demonstrate the meaning of percent as a ratio whose second terms is 100.	F3a
A. Conceptualization.	
1. To use models to represent percents.	F3a
B. Problem Solving And Applications	
1. To use the meaning of percent in solving practical problems.	F2a, F3a
II. PERCENT, FRACTION, DECIMAL EQUIVALENTS	
To express ratios as percents, fractions, or decimals and to relate each form to the other two.	F3a
A. Conceptualization	
1. To recognize equivalent expressions involving selected fractions, decimals and percents using models or easily recognized fractions.	F3a
B. Mental Arithmetic	
1. To use easily recognized fractions and give fraction, decimal and percent equivalents.	F3a
C. Estimation	
1. To estimate equivalents for fractions, decimals and percent using easily recognized fractions.	F3a
D. Calculators	
1. To express any ratio as a percent or decimal.	F3a, F5a
E. Problem Solving And Applications	
1. To solve problems using fraction, percent and decimal equivalents.	F2a, F3a
III. USING PERCENT	
To find a percent of a number.	F3a
A. Conceptualization	
1. To recognize and use the meaning of percent in finding either the part (percentage) or the whole (base) when the percent (rate) is given.	F3a
B. Mental Arithmetic	
1. To find selected percents of a number mentally:	F3a
a. 1%, 10%, 50%, 100%	F3a
b. 200%, 300% and other multiples of 100%	F3a
c. 5%, 15%, 20%, 25%	F3a
C. Estimation	
1. To estimate the percent of a number using easily recognized fractions.	F3a
D. Calculators	
1. To find a percent of a number.	F3a, F5a
E. Problem Solving And Applications	
1. To solve percent problems, including percent of increase or decrease.	F2a, F3a
MEASUREMENT	
I. LENGTH AREA, VOLUME, ANGLES	
To measure length, area, volume and angles.	F3a
A. Conceptualization	
2. To identify and describe concepts of area, perimeter, volume and angle measure.	F3a
3. To distinguish among situations which call for measuring length, area or volume.	F3a
4. To identify and describe concepts of circumference and surface area.	F3a
6. To measure area (square units) and volume (cubic units) by the process of covering, filling, and counting and to recognize the relative size of standard units.	F3a
7. To measure a given angle and to draw an angle of a given size.	F3a
8. To read various scales such as rulers and protractors.	F3a

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	NCEO CODE
B. Estimation	
2. To estimate the area or volume of a familiar object or drawing.	F3a
3. To estimate length, area and volume using all appropriate units of measure.	F3a
C. Problem Solving And Applications	
5. To find the area and volume of figures resulting from combining or separating common geometric figures.	F2a, F3a
II. CAPACITY, MASS, TIME, TEMPERATURE	
To measure and use liquid capacity, mass (weight), time, temperature, monetary alue and relationships of the basic metric units.	F3a
A. Conceptualization	
6. To recognize and use the characteristics of the measurement process, including selection of appropriate units, derived units, the role of approximation and the conversion-of-units process.	F3a
7. To recognize and use the metric system, including the decimal relationship among the various units and the relationships among cubic units, capacity units and mass units.	F3a
8. To recognize and use the concept of precision of measurement.	F3a
B. Estimation	
2. To make estimations of the capacity of various common containers in terms of metric units.	F3a
3. To make estimations of weight in terms of metric units.	F3a
C. Problem Solving And Applications	
2. To use a table of equivalents to solve simple problems involving the conversion of units within a system of measurement.	F2a, F3a
3. To solve multi-step verbal problems posed within a measurement context.	F2a, F3a
GEOMETRY	
I. SHAPE	
To recognize and use the shapes in one, two and three dimensions.	F3a
A. Conceptualization	
1. To identify and illustrate appropriate geometric shapes.	F3a
B. Problem Solving	
1. To solve problems involving appropriate geometric shapes.	F2a, F3a
II. SHAPE PROPERTIES	
To recognize and use properties of one, two and three dimensional shapes such as equal sides, equal angles and symmetry.	F3a
A. Conceptualization.	
1. To identify or illustrate properties of appropriate geometric shapes.	F3a
B. Problem Solving And Applications	
1. To solve problems using properties of appropriate geometric shapes.	F2a, F3a
III. RELATIONS AMONG GEOMETRIC OBJECTS	
To recognize and use the relations of congruence, similarity, intersection, parallelism and perpendicularity for appropriate figures in one, two and three dimensions.	F3a
A. Conceptualization	
1. To identify and illustrate appropriate relations among figures.	F3a
B. Problem Solving And Applications	
1. To solve problems using the appropriate relations among shapes.	F3a
IV. POSITION	
To recognize and use informal and formal coordinate systems on lines and planes to specify locations and distances.	F3a
A. Conceptualization	
1. To identify and produce points satisfying given conditions.	F3a

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B. Estimation	
1. To estimate distances and positions in the coordinate plane.	F3a
C. Problem Solving And Applications	
1. To solve problems using position concepts and notation.	F2a, F3a
V. TRANSFORMATIONS	
To recognize and use the transformations of reflection in a line (flip), translation (slide), rotation about a point (turn), and size change (enlargement and reduction).	F3a
A. Conceptualization	
1. To recognize and produce appropriate transformations.	F3a
VI. VISUALIZING-SKETCHING-CONSTRUCTING	
To visualize, sketch and construct geometric objects.	F3a
A. Conceptualization	
1. To visualize, sketch and construct geometric shapes or relationships.	F3a
B. Problem Solving And Applications	
1. To solve problems requiring visualizing sketching or constructing geometric shapes or relationships.	F2a, F3a
STATISTICS AND PROBABILITY	
I. TABLES	
To construct, read and interpret tables.	F3a
D. Calculators And Computer	
1. To generate tables using calculators and computers.	F3a, F5a
II. GRAPHS	
To construct, read and interpret graphs.	F3a
A. Conceptualization	
1. To read graphs	F3a
a. Picture graphs, Bar graphs	F3a
b. Line graphs, Line plots	F3a
c. Circle graphs	F3a
d. Stem-and-leaf plots, Box plots and Scatter plots	F3a
B. Estimation	
1. To make comparisons among graphs.	F3a
2. To interpolate on graphs.	F3a
3. To extrapolate on graphs.	F3a
4. To use a fitted line on a scatter plot for prediction.	F3a
C. Computation	
1. To determine appropriate scales for graphs.	F3a
2. To construct graphs.	F3a
D. Problem Solving And Applications	
2. To determine patterns, see trends, predict outcomes and make wise choices using graphs.	F2a, F3a
III. DESCRIPTIVE STATISTICS	F3a
To read, interpret, determine and use descriptive statistics.	
A. Conceptualization	
1. To define terms:	F3a
b. outlier, quartile	F3a
B. Computation	
2. To determine mean, median and range.	F3a
3. To determine outlier and quartile.	F3a
C. Problem Solving And Applications	
1. To determine patterns, see trends, predict outcomes and make wise choices using descriptive statistics.	F2a, F3a

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IV. PROBABILITY	
To read, interpret, determine and use probabilities.	F3a
A. Conceptualization	
B. Mental Arithmetic	
1. To determine probabilities of simple events.	F3a
2. To determine the probability an event will not occur, given the probability the event will occur.	F3a
C. Computation	
1. To determine probabilities of compound events.	F3a
D. Problem Solving And Applications	
1. To use probability devices to simulate real world events.	F3a
E. Calculators And Computers	
1. To use calculators to determine probabilities.	F3a, F5a
2. To use computers to simulate compound events.	F3a, F5a
ALGEBRAIC IDEAS--VARIABLES	
I. EXPRESSIONS	
To understand and use expressions containing variables.	F3a
A. Conceptualization	
1. To recognize and use the concept of variable in expressions.	F3a
B. Computation	
1. To evaluate expressions.	F3a
C. Estimation	
1. To estimate values of expressions.	F3a
D. Calculators	
1. To use calculators to evaluate expressions.	F3a, F5a
II. VERBAL, SYMBOL, MODEL RELATIONS	
To use variables in translating among verbal expressions, symbols, and situations that are pictorial or practical.	F3a
B. Problem Solving And Applications	
1. To solve problems represented physically, pictorially, symbolically or verbally.	F2a, F3a
III. OPEN SENTENCES	
To use variables to write and solve open sentences.	F3a
A. Conceptualization	
1. To recognize and use the concept of variable in open sentences.	F3a
B. Computation	
1. To find solutions to open sentences.	F3a
C. Problem Solving And Applications	
1. To find solutions to problems stated verbally.	F2a, F3a
REAL NUMBERS AND PROPERTIES	
I. DISTRIBUTIVE PROPERTY	F3a
To recognize and apply the distributive property.	
A. Conceptualization	
1. To recognize equivalent manipulative or pictorial representations of the distributive property.	F3a
B. Mental Arithmetic	
1. To use the distributive property for mental arithmetic short cuts.	F3a
C. Problem Solving And Applications	
1. To apply the distributive property to problems solving situations.	F2a, F3a
II. INTEGERS	F3a
To recognize, use and compute with integers.	

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A. Conceptualize	
1. To interpret and compare integers in familiar situations.	F3a
B. Computation	
1. To determine the sign of the answer for integer computation.	F3a
2. To compute with integers.	F3a
C. Problem Solving And Applications	
1. To use integers in everyday situations.	F2a, F3a
III. EXPONENTS, POWERS AND ROOTS	
To recognize and use concepts of exponents, powers and roots.	F3a
A. Conceptualization	
1. To recognize and use patterns of squares and cubes.	F3a
B. Estimation	
1. To estimate square roots.	F3a
C. Calculators	
1. To use calculators to find or approximate solutions to exponential equations.	F3a, F5a
D. Problem Solving And Applications	
1. To solve problems involving powers and roots.	F2a, F3a
FUNCTIONS AND GRAPHS	
I. FUNCTIONS	
A. Computation	
1. To represent a function with a table of values or a graph.	F3a
2. To recognize, describe, and express in symbols a relationship between two sets.	F3a
B. Problem Solving And Applications	
1. To solve problems using functions.	F2a, F3a
II. GRAPHS	F3a
To identify and interpret graphs representing situations, tables of values or sentences	
A. Conceptualization	
1. To identify an appropriate graph given a table of values or an equation and conversely.	F3a
B. Problem Solving And Applications	
1. To use graphs to solve problems.	F2a, F3a
PROBLEM SOLVING AND LOGICAL REASONING	
I. PATTERNS	
To identify, use, and construct patterns.	F3a
A. To identify a patterns and determine a missing element.	F3a
B. To create a pattern , given a formal rule.	F3a
C. To extrapolate by developing a formal rule for a pattern.	F3a
II. UNDERSTANDING PROBLEMS	
To demonstrate an understanding of a problem	F3a
A. To determine what is to be found.	F3a
B. To identify necessary information to solve a problem.	F3a
C. To determine insufficient information.	F3a
D. To formulate appropriate questions.	F3a
E. To formulate a problems for mathematical expressions or number sentences.	F3a
III. PROBLEM SOLVING STRATEGIES	
To select and apply appropriate problem solving strategies.	F2a, F3a
A. To identify and use a patterns to solve a problem.	F2a, F3a
B. To make an organized list or table to solve a problem.	F2a, F3a
C. To make and test to solve a problem.	F2a, F3a
E. To make or use a drawing, a graph or a physical model to solve a problem.	F2a, F3a

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F.	To write an open sentence to solve a problem.	F2a, F3a
G.	To solve a simpler problem to solve a problem.	F2a, F3a
H.	To eliminate possibilities to solve a problem.	F2a, F3a
I.	To select the appropriate operation(s) to solve a one-step or multi-step problem.	F2a, F3a
IV.	**EVALUATING SOLUTIONS**	
	To interpret and evaluate the solution to a problem.	F2a, F3a
A.	To check the solution(s) with the conditions of the problem.	F2a, F3a
B.	To find and evaluate alternative processes for solving the problem.	F2a, F3a
C.	To formulate an extension of the problem.	F2a, F3a
D.	To formulate a generalization of a given problem.	F2a, F3a
V.	**LOGICAL REASONING**	
	To use logical reasoning.	F2a, F3a
A.	To determine in the attributes used to classify a set and vice-versa.	F2a, F3a
B.	To interpret and use statements involving logical operations and quantifiers (and, or, not, if...then, every, all, some, no, at least, at most, each, exactly).	F2a, F3a
C.	To recognize and draw valid conclusions from given information.	F2a, F3a
	CALCULATORS	
I.	**CALCULATOR KEYS AND FEATURES**	
	To recognize specific calculator keys and selected calculator features.	F5a
A.	To recognize specific calculator keys.	F5a
B.	To recognize appropriate key sequences for automatic constant features.	F5a
C.	To recognize appropriate calculator keys related to selected terms associated with mathematical operations.	F3a, F5a
II.	**COMPUTATION**	
	To perform appropriate computations with a calculator.	F3a, F5a
B.	To use a calculator to compute appropriate sums, differences, products and quotients with whole numbers, decimals and fractions.	F3a, F5a
C.	To use a calculator to compute answers to percent problems including percent of increase or percent of decrease.	F3a, F5a
III.	**LIMITATIONS AND CALCULATOR DISPLAY**	
	To recognize certain common limitations to calculators and be able to interpret selected calculator-displayed symbols.	F3a, F5a
A.	To recognize and interpret the calculator display.	F3a, F5a
B.	To recognize the limitations of the calculator regarding decimal numbers display and order of operations.	F3a, F5a
	ESSENTIAL GOALS AND OBJECTIVES FOR SOCIAL STUDIES EDUCATION, GRADES 7-9	
	I=INTRODUCE	
	D=DEVELOP	
	R=REINFORCE	
	KNOWLEDGE GOALS AND OBJECTIVES	
	1. Understand the rights and responsibilities of democratic citizenship.	F4a
ID	a. Identify rights and liberties guaranteed in the United States Constitution.	F4a
ID	b. Understand situations in which rights have been denied.	F4a
ID	c. Understand that an individuals rights may differ with those of another individual or with the general welfare.	F4a
D	d. Understand differences between stated rules and actual practices.	F4a

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R	e.	Understand and support the right of all to present different points of view.	F4a
D	f.	Understand the responsibility of participation in society and governments both as an individual and as a member of a group. human rights.	F4a
I D	g.	Understand the role and function of responsible dissent in a democracy.	F4a
I D	h.	Understand statements of basic human rights and responsibility found in oral tradition and documents such as constitutions, declarations, and treaties.	F4a
I D	i.	Know some of the historical developments that have contributed to or impeded human rights.	F4a
D	j.	Know the responsibility people have to maintain a democratic society.	F4a
	2.	**Understand the role and function of law in a democracy.**	F4a
D	a.	Understand the purposes of law.	F4a
D	b.	Understand how legal and judicial decisions are made.	F4a
D	c.	Understand how laws can be changed.	F4a
D	d.	Understand how conflicts in laws are resolved.	F4a
D	e.	Know the duties of participants in a court of law.	F4a
D	f.	Understand the factors that might affect justice.	F4a
D	g.	Understand the development of legal and judicial procedures.	F4a
D	h.	Understand how the Constitution limits governmental action.	F4a
D	i.	Understand the dynamic nature of law.	F4a
D	j.	Understand the limitations of formal legal processes in settling disputes.	F4a
I	k.	Understand how laws may create conflicting moral obligations.	F4a
D	l.	Understand that the judicial system provides for both public and private justice.	F4a
D	m.	Recognize the differing functions of the civil and criminal justice systems.	F4a
D	n.	Know individual rights within the criminal justice system.	F4a
I	o.	Identify similarities and differences between the judicial system in the United States and those in other countries.	F4a
	3.	**Understand persistent global issues.**	F4a
D R	a.	Define global issues which affect people all over the world	F4a
D R	b.	Understand environmental issues.	F4a
D R	c.	Understand social issues	F4a
D R	d.	Understand global economic issues.	F4a
D R	e.	Understand relationships among global issues.	F4a
D R	f.	Understand interdependence among nations of the world.	F4a
D R	g.	Understand that unsolved issues elsewhere in the world often impact upon the United States.	F4a
D R	h.	Understand that criteria for evaluating personal and social problems may vary from culture to culture.	F4a
D R	i.	Understand possible worldwide effects of decisions made by individuals, communities and nations	F4a
D R	j.	Know how to create, analyze and evaluate alternative futures for the world.	F4a
I	k.	Understand the evolving nature of international law.	F4a
D R	l.	Understand some of the issues related to food consumption disparity between developed and developing nations.	F4a
D R	m.	Understand ways that people are interrelated.	F4a
	4.	**Understand diverse human cultures, customs, beliefs and values systems.**	F4a
R	a.	Understand that people everywhere have the same basic needs, but the manner in which they meet these needs differs according to their culture.	F4a
D R	b.	Understand that customs and habits differ from one group to another.	F4a
R	c.	Understand that within a community there may exist one or several cultural, racial, or ethnic groups.	F4a
D R	d.	Recognize the importance of being objective and fair in regard to cultural, racial, or ethnic groups.	F4a
D	e.	Understand the components of culture.	F4a

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D	f.	Recognize that social-cultural change may create varying degrees of resistance and conflict.	F4a
I	g.	Recognize the importance of using the procedures of analytical thinking in understanding cultural groups other than their own.	F4a
I	h.	Understand the concept of culture.	F4a
	5.	**Understand the history and present state of their own and other cultures**	F4a
	a.	Know basic historical facts related to the development of the United States and other cultures.	F4a
IDR	b.	Understand urban, rural and suburban development.	F4a
DR	c.	Understand the impact of technology on society.	F4a
DR	d.	Understand changes in female and male roles.	F4a
DR	e.	Understand that there are differences in family structures.	F4a
DR	f.	Understand changes in family, work, and population patterns.	F4a
D	g.	Identify occupations and career choices.	F4a
D	h.	Understand the career decision making and planning process.	F4a
D	i.	Identify methods, processes, and effects of change and continuity.	F4a
D	j.	Understand changes in racial/ethnic relations.	F4a
D	k.	Understand persistent social problems.	F4a
D	l.	Understand the development of educational institutions.	F4a
D	m.	Understand the development of religious institutions.	F4a
D	n.	Know historical influences on the development of the governmental system.	F4a
D	o.	Understand that people view the past differently.	F4a
	6.	**Understand basic economics and economic systems.**	F4a
DR	a.	Understand basic economic concepts.	F4a
DR	b.	Understand the role of money in the economy.	F4a
DR	c.	Understand factors that influence economic behavior.	F4a
DR	d.	Understand economic concepts as they apply to individual decision-making.	F4a
DR	e.	Understand the basic functions of an economic system.	F4a
DR	f.	Understand how a market economy works.	F4a
DR	g.	Understand the historic and current role of labor in our economic system.	F4a
ID	h.	Understand the relationships between the factors of production - land, labor, capital, and management in our economic systems.	F4a
ID	i.	Understand the relationship of government to the economy.	F4a
ID	j.	Understand the relationship of government to the economy.	F4a
ID	k.	Understand the relationship between specific economic goals and overall social goals.	F4a
I	l.	Understand potential conflicts between basic economic goals.	F4a
I	m.	Identify similarities and differences between the economic system of the United States and that of other countries.	F4a
I	n.	Understand basic international economic concerns.	F4a
I	o.	Understand development of labor/management relationships.	F4a
	7.	**Understand how to be an effective producer and consumer of goods and services.**	F4a
R	a.	Understand factors that influence consumer behavior.	F4a
R	b.	Give examples of their own listed resources and unlimited wants.	F4a
R	c.	Demonstrate comparison shopping skills and the use of consumer aids in shopping for various goods and services.	F4a
R	d.	Identify deceptive sales techniques and practices.	F4a
R	e.	Recognize the need to conserve energy.	F4a
I	f.	Identify situations in which cost benefit analysis reveals the nature of public policy decisions on consumer economic issues.	F4a
ID	g.	Identify various ways in which members of a household must know and use mathematics to make sound consumer decisions.	F4a
ID	h.	Identify the common causes of consumer complaints and redress procedures.	F4a
ID	i.	Recognize the relationship between the protection of consumer rights at various levels of government and the exercise of individual responsibility by both consumers and	F4a

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		providers of goods and services.	
ID	j.	Locate reliable sources of information which consumers may use to help them make better informed purchases and help them become more effective in their role as consumer citizens.	F4a
ID	k.	Recognize that consumer decisions to use or conserve energy resources have both individual and aggregate effects, as well as short and long-term consequences.	F4a
ID	l.	Recognize that financial institutions and services are in the process of major transition, requiring frequent study and analysis by consumers to be able to protect financial resources.	F4a
ID	m.	Analyze the relationship between consumer decisions on diet and health care.	F2a, F4a
	8.	**Understand geographic principles/concepts including relationships between people and the physical environment and the significance of place, location, region, interaction, and diffusion.**	F4a
R	a.	Define the terms environment, place, location, region and interaction.	F4a
DR	b.	Describe the physical environment.	F4a
R	c.	Understand how the physical environment is used to meet human needs and wants.	F4a
DR	d.	Describe how people have responded to the physical environment.	F4a
DR	e.	Identify the locations and characteristics of major places.	F4a
DR	f.	Understand why people, things, activities, are located where they are.	F4a
R	g.	Understand how people change the physical environment.	F4a
DR	h.	Describe the location and characteristics of major regions.	F4a
DR	i.	Describe the interaction which take place within the regions and between regions.	F4a
R	j.	Describe how culture changes as a result of the diffusion of ideas and the migration of people.	F4a
	9.	**Know the main structure and functions of government.**	F4a
DR	a.	Know the purposes of government.	F4a
I	b.	Understand the range and importance of decisions make by state and local government.	F4a
D	c.	Associate governmental actions with the appropriate level of government.	F4a
I	d.	Understand the basic political principles expressed or implied in the U.S. Declaration of Independence, the U.S. Constitution, court decisions and laws.	F4a
I	e.	Understand the organization and functions of state and local governments and their relationships to the federal government.	F4a
I	f.	Understand how decisions made by various levels of government are interdependent.	F4a
I	g.	Understand the limits on decision-making powers of the government.	F4a
I	h.	Understand the legislative process.	F4a
I	i.	Understand voter behavior.	F4a
I	j.	Understand the role of political parties.	F4a
I	k.	Associate excerpts from the Declaration of Independence, Bill of Rights, state constitution, and a local city or township charter with the proper document.	F4a
I	l.	Understand how, when and with what qualifications public officials are nominated, elected, or appointed.	F4a
I	m.	Understand how public officials can be removed from office.	F4a
I	n.	Understand registration and voting procedures.	E2a, F4a
I	o.	Recognize the legality and constitutionality of individual and group actions.	F4a
I	p.	Understand interpretations of basic political principles in different periods of U.S. history.	F4a
I	q.	Identify the principles and purposes in the political systems of the United States and other nations.	F4a
ID	r.	Understand the organization and functions of the executive, legislative, and judicial branches and independent regulatory agencies of the federal government.	F4a
ID	s.	Understand the changing roles of various levels and branches of government.	F4a
I	t.	Understand the range and importance of decisions made by the various branches and independent regulatory agencies of the federal government.	F4a
ID	u.	Identify the forms of government.	F4a

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			NCEO CODE
ID	v.	Understand influences on governmental decision-making.	F4a
I	w.	Identify similarities and differences in political decision-making in the United States and other nations.	F4a
ID	x.	Associate national, state and local problems with appropriate governmental agency or department.	F4a
ID	y.	Understand the role of interest groups.	F4a
	10.	**Understand the organization of human societies.**	F4a
D	a.	Compare customs and habits of groups.	F4a
R	b.	Understand ways groups are interdependent, cooperative, and competitive.	F4a
D	c.	Understand types of conflicts between groups and ways conflicts are resolved.	F4a
D	d.	Understand how and why groups differ.	F4a
D	e.	Understand the decision-making processes used by groups.	F4a
D	f.	Identify the variety of institutions and groups and the functions of those institutions and groups.	F4a
D	g.	Understand why human beings form institutions and groups.	F4a
D	h.	Understand the relationships among institutions, groups, and individuals.	F4a
D	i.	Understand the changing nature of institutions and groups over time.	F4a
	11.	**Understand the relationships between individuals and groups.**	F4a
R	a.	Identify the variety of roles one can have within a group.	F4a
R	b.	Understand that the role within a group may be assigned or achieved.	F4a
R	c.	Understand reasons why there are different roles within groups.	F4a
D	d.	Understand the possible advantages and disadvantages of belonging to a variety of groups.	F4a
D	e.	Understand that multiple loyalties and responsibilities result from belonging to a variety of groups.	F4a
D	f.	Understand the importance of self-confidence and self-worth in carrying out responsibilities within groups.	F4a
D	g.	Understand how groups influence behavior.	F4a
ID	h.	Understand how individual perceptions and actions are influenced by the values and behavior patterns of groups with which individuals identify.	F4a
ID	i.	Recognize that there are important values and behaviors that develop outside of a group's influence.	F4a
ID	j.	Understand the ways different groups react to similar social issues.	F4a
	12.	**Understand the psychology of human behavior.**	F4a
I	a.	Understand the effect of family interaction on a child's development.	F4a
I	b.	Understand the effects of biological factors on human behavior.	F4a
I	c.	Understand verbal and non-verbal indicators of attitude.	F4a
I	d.	Understand the influence of self-concept, perception, role expectations and role conflicts on personal behavior.	F4a
I	e.	Understand the effects of significant emotional and life stage events on human behavior.	F4a
D	f.	Understand and accept one's own value system and the value systems of others.	G2, G3a, G3b
D	g.	Understand and develop the interpersonal skills needed to interact with others.	G1, G4
D	h.	Understand and accept the responsibility and consequences of personal and group decisions.	D1a, D3
D	i.	Understand the effects of change upon the individual.	F4
		DEMOCRATIC VALUES GOALS AND OBJECTIVES	
	1.	**Develop awareness and concern for the rights and well-being of others.**	G3a
R	a.	Show concern for the well-being of others' rights.	G3a
R	b.	Show concern for the dignity of others.	G3a
R	c.	Be aware of the distinctive characteristics of others.	G3b
	2.	**Develop a positive self-concept, which includes an awareness of one's self worth, values, ethnic background, and culture.**	G2a
R	a.	Recognize the way in which activities reflect one's own personal values.	F4a

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R	b.	Become aware of family and peer values.	F4a
R	c.	Respect for their own heritage and background.	G2, G3
R	d.	Realize how personal behavior and learning experiences contribute to a positive self-concept.	G2a
R	e.	Recognize acceptable criteria for judging individual actions in a democracy.	F4a
	3.	**Develop an understanding of the values, ethnic background and cultures of people from a variety of racial/ethnic/cultural groups.**	F4a
R	a.	Recognize that ethnic backgrounds and culture determine people's values.	F4a
R	b.	Be aware of positive attributes individuals worthy of emulation from a variety of cultural groups, including groups which make up the American society.	F4a
R	c.	Recognize behaviors which hurt others.	F4a
R	d.	Recognize commonalties and differences among beliefs, values, and behaviors of people from a variety of racial/ethnic/cultural groups.	F4a
R	e.	Be aware of ways of positively interacting with others of varying backgrounds.	F4a, G4
D	f.	Show respect for the dignity and wroth of those who belong to a variety of cultural, racial, or ethnic groups.	G3b
D	g.	Recognize the effects of cultural diversity in society.	F4a
D	h.	Recognize relationships and conflicts among beliefs, values, and behaviors of other persons and groups.	F4a
	4.	**Develop a reasoned commitment to the principles and value which sustain a democracy.**	E
D	a.	Accept the rights and responsibilities of democratic citizenship.	E1a
R	b.	Respect the right of all to present different points of view in the classroom.	G3a
R	c.	Respect the right of all to present different points of view in the community.	G3a
R	d.	Respect and support the role and function of laws in a democracy.	E1a
D	e.	Respect and support the role and function of responsible dissent in a democracy.	E
	5.	**Develop a commitment to participate in society and governments both as an individual and as a member of a group.**	A2e, D1a, E1a, E3
D	a.	Be aware of responsibilities people have to maintain a democratic society.	D, E
D	b.	Recognize characteristics of good leader.	F4
R	c.	Recognize examples of equity.	F4
R	d.	Recognize examples of injustices.	F4
R	e.	Defend rights and liberties of all people.	E
D	f.	Support equal opportunity.	E, G3b
D	g.	Recognize and encourage ethical and lawful behavior in others.	E
I	h.	Comply with local, state and federal laws.	E1
I	i.	Work toward elimination of "unjust" and "unworkable" laws and regulations.	E
D	j.	Recognize that individual civic action is important.	E
D	k.	Work for improvement of conditions by applying personal skills.	E3c
D	l.	Participate in government.	E3a
		SKILLS, GOALS AND OBJECTIVES	
	1.	**Gather, interpret, analyze, summarize, synthesize and evaluate information.**	F4
R	a.	Use a variety of senses to obtain information.	F4
R	b.	Choose appropriate sources for information desired.	F4
DR	c.	Obtain desired information from a variety of sources.	F4
DR	d.	Group data into appropriate categories.	F4
R	e.	Recognize that people may interpret the same objects or events differently.	F4
DR	f.	Identify cause and effect relationships.	F4
DR	g.	Distinguish between fact and opinion.	F4
R	h.	Formulate predictions based on factual information.	F4
R	i.	Translate information from one form to another.	F4
DR	j.	Draw inferences from a variety of sources.	F4

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D R	k.	Identify specific sub-topics of major topics.	F4
D R	l.	Detect bias in data presented.	F4
D R	m.	Compare and contrast information.	F4
R	n.	Select main ideas from information.	F4
D R	o.	Arrange information in usable forms.	F4
R	p.	Draw conclusions.	F4
D	q.	Formulate hypotheses.	F4
D	r.	Determine different outcomes if events were changed.	F4
D	s.	Propose a new plan.	F4
D	t.	Decide if information is significant to the topic.	F4
D	u.	Evaluate the quality of information.	F4
D	v.	Test hypotheses and revise as needed.	F4
	2.	**Make Decisions**	F4
D	a.	Recognize the occasion and need for decisions.	F2a, F4
D	b.	Analyze the problem.	F4
D	c.	Identify possible alternative courses of action.	F4
D	d.	Project long and short term consequences of possible alternative courses of action.	F4
D	e.	Identify and evaluate consequences of possible alternative courses of action.	F4
D	f.	Choose and develop strategies to carry out the decision.	F4
D	g.	Apply the strategies in implementing a decision or solving a problem.	F4
D	h.	Re-evaluate and reformulate the process if goals are not met or new information is introduced.	F4
	3.	**Develop the skills necessary for participation in society and governments both as an individual and as a member of a group.**	F4
D R	a.	Present own ideas.	F1
D	b.	Paraphrase what has been heard and obtain agreement from the speaker that the paraphrasing is correct.	F1a
D	c.	Listen and respond appropriately.	F1a
D	d.	Solicit clarification from others when needed.	F1
D R	e.	Encourage others to express themselves.	no match
D	f.	Recognize that divergent roles exist within a group.	F4
D	g.	Recognize emotions and feelings operating within a group and allow for their expression	G4c
D	h.	Recognize and permit the expression of different values, beliefs and ideas within a group.	G3c
D R	i.	Remain open to change.	G
D	j.	Use conflict resolution strategies.	G4c
	4.	**Reading/Study skills in the social studies.**	F3b, F4a
R	a.	Use word analysis skills.	F3b, F4a
D R	b.	Use context clues to gain meaning.	F3b
D	c.	Use appropriate late sources to gain meaning of essential terms and vocabulary.	F3b
R	d.	Recognize, define and appropriately use social studies terms.	F3b
R	e.	Obtain literal meaning from written materials.	F3b
R	f.	Obtain interpretive and implied meaning from written materials.	F3b
R	g.	Identify and use various parts of a book and other written material.	F3b
R	h.	Read for a variety of purposes.	F3b
R	i.	Adjust reading to suit various purposes.	F3b
R	j.	Use resources and services that the library provides.	F4
R	k.	Apply computer operational skills to run a software program.	F5a
	5.	**Map and globe skills.**	F4a
R	a.	Identify that globes and maps are models.	F4a
R	b.	Orient a map and note directions.	F4a
R	c.	Locate places on maps and globes.	F4a
D R	d.	Use scale and compute distances.	F4a
R	e.	Identify, interpret and use map symbols.	F4a
D R	f.	Compare and contrast maps.	F4a

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ESSENTIAL GOALS AND OBJECTIVES FOR SCIENCE EDUCATION, MIDDLE SCHOOL	NCEO CODE
Constructing New Scientific Knowledge (objectives for grade levels)	
Objective 7. Generate scientific questions about the world, based on observation.	F4a
8. Design and conduct simple investigations.	F4a
9. Investigate toys/simple appliances and explain how they work using instructions and appropriate safety precautions.	F4a
10. Use measurement devices to provide consistency in an investigation.	F4a
11. Use sources of information to help solve problems.	F4a
12. Write and follow procedures in the form of step-by-step instructions, recipes, formulas, flow diagrams, and sketches.	F3c, F4a
Reflecting on Scientific Knowledge (objectives for grade levels)	
Objective 6. Evaluate the strengths and weaknesses of claims, arguments, or data.	F2a, F4a
7. Describe limitations in personal knowledge.	G2c
8. Show how common themes of science, mathematics, and technology apply in selected real world contexts.	F4a
9. Describe the benefits and risks of new technologies or patterns of human activity.	F4a
10. Recognize the contributions made in science by cultures and individuals of diverse backgrounds.	F4a
USING SCIENTIFIC KNOWLEDGE TO UNDERSTAND LIFE SCIENCE	
Cells (objectives for grade levels)	
Objective 2. Describe similarities/differences between single-celled and multicellular organisms.	F4a
3. Explain why specialized cells are needed by plants and animals.	F4a
4. Explain how cells use food as a source of energy.	F4a
Living Things (objectives for grade levels)	
Objective 6. Compare and classify organisms into major groups on the basis of their structure.	F4a
7. Describe the life cycle of a flowering plant.	F4a
8. Describe evidence that plants make and store food.	F4a
9. Explain how selected systems and processes work together in animals and plants.	F4a
Heredity (objectives for grade levels)	
Objective 2. Describe how the characteristics of living things are passed on through generations.	F4a
3. Describe how heredity and environment may influence/determine characteristics of an organism.	F4a
Evolution (objectives for grade levels)	
Objective 3. Describe how biologists might trace possible evolutionary relationships among present and past life forms.	F4a
Ecosystems (objectives for grade levels)	
Objective 6. Describe common patterns of relationships among populations.	F4a
7. Predict the effects of changes in one population in a food web on other populations.	F4a
8. Describe how all organisms in an ecosystem acquire energy directly or indirectly from sunlight.	F4a
9. Describe the likely succession of a given ecosystem over time.	F4a
10. Identify some common materials that cycle through the environment.	F4a
11. Describe ways in which humans alter the environment.	F4a
12. Explain how humans use and benefit form plant and animal materials.	F4a
USING SCIENTIFIC KNOWLEDGE TO UNDERSTAND PHYSICAL SCIENCE MATTER AND ENERGY (objectives for grade levels)	
Objective 8. Measure physical properties of objects or substances (mass, weight, temperature, dimensions, area, volume).	F4a

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9. Describe when length, mass, weight, area, or volume are appropriate to describe the size of an object or the amount of substance.	F4a
10. Classify substances as elements, compounds, or mixtures.	F4a
11. Describe matter as consisting of extremely small particles (atoms) that bond together to form molecules.	F4a
12. Describe the arrangement and motion of molecules in solids, liquids, and gases.	F4a
13. Describe energy and the many common forms it takes (mechanical, heat, light, sound, electrical, magnetic, chemical, nuclear).	F4a
14. Describe how common forms of energy can be converted, one to another.	F4a
15. Describe electron flow in simple electrical circuits.	F4a
16. Use electric currents to create magnetic fields.	F4a
Changes in Matter (objectives for grade levels)	
Objective 4. Describe common physical changes in materials: evaporation, condensation, thermal expansion and contraction.	F4a
5. Describe common chemical changes in terms of properties of reactants and products.	F4a
6. Distinguish between physical and chemical changes in natural and technological system.	F4a
7. Describe how waste products accumulating from natural and technological activities create pollution.	F4a
8. Explain physical changes in terms of the arrangement and motion of atoms and molecules	F4a
Motions of Objects (objectives for grade levels)	
Objective 4. Qualitatively describe and compare motions in three dimensions.	F4a
5. Relate changes in speed or direction to unbalanced forces in two dimensions.	F4a
6. Describe the forces exerted by magnets, electrically charged objects, and gravity.	F4a
7. Design strategies for moving objects by means of the application of forces, including the use of simple machines.	F4a
Waves and Vibrations (objectives for grade levels)	
Objective 6. Explain how sound travels through different media.	F4a
7. Explain how echoes occur and how they are used.	F4a
8. Explain how light helps us to see.	F4a
USING SCIENTIFIC KNOWLEDGE TO UNDERSTAND EARTH AND SPACE SCIENCE	
Geosphere (objectives for grade levels)	
Objective 7. Describe and identify surface features using maps.	F4a
8. Explain how rocks and minerals are formed.	F4a
9. Explain how rocks and fossils are used to determine the age and geological history of the earth.	F4a
10. Explain how rocks are broken down, how soil is formed, and how surface features change	F4a
11. Explain how technology changes the surface of the earth.	F4a
Hydrosphere (objectives for grade levels)	
Objective 5. Describe various forms that water takes on the earth's surface and conditions under which they exist.	F4a
6. Describe how rain water in Michigan reaches the oceans.	F4a
7. Describe the origins of pollution in the hydrosphere.	F4a
Atmosphere and Weather (objectives for grade levels)	
Objective 5. Describe the composition and characteristics of the atmosphere.	F4a
6. Describe patterns of changing weather and how they are measured.	F4a
7. Explain the water cycle and its relationship to weather patterns.	F4a
8. Describe health effects of polluted air.	F4a
Solar System, Galaxy, and Universe (objectives for grade levels)	
Objective 3. Compare the earth to other planets in terms of supporting life.	F4a
4. Describe, compare, and explain the motions of planets, moons, and comets in the solar system.	F4a
5. Describe and explain common observations of the day and night skies.	F4a
6. Explain how the solar system formed.	F4a

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Document Utilized

Montana School Accreditation Standards and Procedures Manual, Appendix A, Model Learner Goals (August, 1993)

Background

In 1989, the state board of education adopted accreditation standards. These program-area standards are mandatory for districts, but the norm-referenced assessment required in the accreditation standards is not tied to performance levels. Although the standards are currently in place, the state has begun to examine and revise them under the *Goals 2000: Educate America Act*. The current program-area standards do not contain grade groupings; the standards apply to K-12. The model learner goals contain goals for the primary level, intermediate level, and upon graduation.

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MODEL LEARNER GOALS	NCEO CODE
COMMUNICATION ARTS: INTERMEDIATE	
GENERAL COMMUNICATION ARTS LEARNER GOALS	
1. In the study of languages, students shall be given the opportunity to:	
a. Learn how languages function, evolve, and reflect cultures	F4a
b. Learn how context- topic, purpose, audience- influences the structure and use of language.	F4a
c. Have the opportunity to develop second-language proficiency.	F4a
2. In the study of literature, students shall be given the opportunity to:	
a. Read, listen to, view, and study a variety of classical, contemporary, and multicultural literature, at all grade levels. Literature shall include poetry, fiction and nonfiction, and drama.	F4b
b. Respond to literature through writing, speaking, and through media and the fine arts.	F1a, F3c, F4b
c. Gain insights from literature, recognizing it as a mirror of human experience.	F4b
d. Learn about their own and other cultures and recognize that literature is a reflection of culture.	F4b
e. Experience literature as a way to appreciate the rhythms and beauty of language.	F4b
3. In the study of communication skills, five interwoven strands: listening, speaking, reading, writing, and using media, students shall be given the opportunity to:	
a. Understand and practice the process of listening: perceiving, discriminating, attending, assigning meaning, evaluating, responding, and remembering.	F1a, F2a, F3b, F3c
b. Speak effectively, formally and informally, in all five basic communication functions: expressing feelings, utilizing social conventions, imagining, informing, and controlling.	F1a, F3b, F3c
c. Read for both pleasure and information and approach reading as search for meaning.	F3b
d. Write clearly and effectively to express themselves and to communicate with others.	F3c
e. Use, view, and understand print and electronic media and be aware of the impact of technology and the media on communication.	F5a
4. In the study of thinking, students shall be given the opportunity to:	
a. Think creatively, exploring unique insights, points of view, and relationships.	F4
b. Think logically, testing the validity of arguments and detecting fallacies in reasoning.	F2a
c. Think critically, asking questions, making judgements, and evaluating messages.	F2a

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	NCEO CODE
ENGLISH LANGUAGE MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Understand that words are arbitrary, culturally-based symbols for objects and ideas that change over time and through usage.	F4a
b. Recognize that people gain identity through their language, including pronunciation, word, choice, and nonverbal communication.	F4a
c. Analyze the ways that language changes to accommodate subject, audience, and purpose.	F4a
SECOND LANGUAGE MODEL LEARNER GOALS	
1. An intermediate program in second language shall give the student the opportunity to:	F4a
a. Experience oral and literary traditions of the second language culture.	F4a
b. Expand cross-cultural understanding.	F4a
c. Speak and understand more complex ideas and information in directed activities, both formal and informal.	F4a
d. Use reading and writing skills in the second language in a variety of meaningful activities.	F4a
LITERATURE MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Expand experiences with classical, contemporary, and multicultural literature.	F4b
b. Respond to literature on the basis of his/her own insights and respect the different responses of others.	F4b, G3a
c. Recognize and understand the interrelationships among the elements in a literary works.	F4b
d. Begin to recognize how culture influences literary works and to compare and contrast that culture with his/her own experiences.	F4b
e. Appreciate and understand how language enhances meaning in literature and how meaning is enhanced by sensory and figurative language; by literary devices such as metric patterns and imagery (e.g., simile, metaphor); and by an author's semantic and connotative qualities.	F4b
f. analyze and evaluate elements of literary works, including character, setting, plot, theme, and imagery.	F2a, F4b
g. Create and share original pieces of literature in a variety of genres that use characters, setting, plot, theme, and imagery.	F4b
LISTENING MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Discriminate between emotional and unemotional speaking and between spontaneous and scripted speaking and acting.	F1a
b. Increase attentiveness by expanding attention span, predicting and rehearsing ideas, and being aware of factors that affect attention.	F1a
c. Recognize a variety of speaking purposes and patterns of organization.	F1a
d. Distinguish fact from opinion, information from persuasion, and logic from emotion.	F1a
e. Respond to what is heard by controlling emotions, asking questions, and giving appropriate feedback.	F1a
f. Expand memory through note-taking and relating new material to old.	F1a
SPEAKING MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Use words, figures of speech, and nonverbal factors to enhance oral presentation.	F1a
b. Organize and expand oral and nonverbal skills to suit the level of communication (interpersonal, intrapersonal, group, public, and mass)	F1a
c. Become increasingly aware of audience feedback during the speech.	F1a
d. Increase confidence and effectiveness as a speaker in al five functions of speaking.	F1a, G2b
READING MODEL LEARNING GOALS	
1. Use appropriate strategies to identify words and their meanings.	F3b
2. Refine his/her use of word attack and context clues which aid comprehension within a word,	F3b

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sentence, paragraph, or an entire work.	
3. Adapt fluency, rate, and style of reading to the purpose of the material.	F3b
4. Read for information and continue to develop study skills.	F3b
5. Read as a leisure activity.	F3b
WRITING MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Write frequently, using varied formats, for a variety of purposes and audiences.	F3c
b. Understand and use spelling, punctuation, capitalization, handwriting, an usage as part of total effectiveness in writing.	F3c
c. Select a topic, generate and organize ideas, and choose appropriate language for his/her writing purpose.	F3c
d. Respond to, revise, and edit his/her own and others' writing.	F3c
MEDIA USE MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity:	
a. Understand and respond to media performances and presentations.	F3b
b. Incorporate media in oral and written presentations.	F3b
c. Understand that media convey messages.	F3b
d. Use a wide variety of print and nonprint media in leisure time, classroom, and library for information and entertainment.	F3b
THINKING SKILLS MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Respond to and evaluate intentions and messages of speakers, writers, presenters, and media.	F2a
b. Differentiate between fact and opinion, recognize logical/illogical sequences, create and hypothesis, and predict outcomes.	F2a
c. Expand creativity, inventiveness, and logical/critical thinking.	F2a
FINE ARTS: MODEL LEARNER GOALS: INTERMEDIATE	
FINE ARTS: GENERAL GOALS Through the Fine Arts, students develop critical and creative thinking and perceptual abilities applicable to all areas of life.	
1. A basic program in fine arts gives the student the opportunity to:	
a. Understand the principal sensory, formal, technical, and expressive qualities of each of the fine arts.	F4b
b. Identify processes, materials, tools, and disciplines required to produce the visual, performing, and literary arts.	F4b
c. Apply their knowledge of concepts, elements, principles, theories, and processes in the fine arts.	F4b
d. Develop their intuitive and creative thought processes as a balance to learning in the cognitive and psychomotor domains.	F4b
e. Make informed judgements about the fine arts and about their relationships to the history, culture, and environments of the world's people.	F4b
f. Understand the relevance of their education in the fine arts to the range of fine arts professions and to a lifetime of aesthetic pleasure.	F4b
g. Use materials, tools, and equipment safely.	C2a, F4b
VISUAL ARTS MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have been given the opportunity to:	
a. observe the sensory and formal applications used by artists.	F4b
b. Identify art processes, forms, and materials from many cultures and historical periods.	F4b
c. Appreciate art in a variety of settings (home, community, classroom, and studio)	F4b
d. Identify materials, tools, and techniques used by artists for expressive purposes.	F4b
e. Understand the elements and principles of art used by the artist to express creative ideas,	F4b

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moods, and feelings.	
f. Know the vocabulary required to describe the sensory, formal, technical, and expressive qualities of art.	F4b
g. Understand the role of galleries and museums in preserving and transmitting art heritage and contemporary culture.	F4b
h. Understand the role of galleries and museums in preserving and transmitting art heritage and contemporary culture.	F4b
i. Discover and discriminate among the methods of expressing imagination, interpreting experience, and selecting materials and techniques.	F4b
j. Demonstrate the ability to solve visual and technical problems in art.	F2a, F4b
k. Analyze, compare, contrast, and distinguish art work from a variety of styles and periods using formal viewing criteria.	F2a, F4b
l. Experience a sense of accomplishment and pleasure from experimentation, innovation, and skill development.	F4b
LITERARY ARTS: INTERMEDIATE	
DRAMA MODEL LEARNER GOALS	
1. If offered at the intermediate level, a course of study in drama shall give the student the opportunity to:	
a. Identify historical, cultural, and environmental elements in a variety of dramatic works.	F4b
b. Apply knowledge of dramatic principles and techniques to enhance enjoyment of reading and viewing dramatic works.	F4b
c. Understand plot, character, setting, and theme.	F4b
d. Recognize the expressive and technical qualities of dramatic work through study, interpretation, and enactment in planned and improvised solo or group presentations.	F4b
e. Evaluate a variety of dramatic works.	F2a, F4b
MUSIC MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Be increasingly aware of music as an important part of everyday life; enjoy music through listening, singing, and playing instruments.	F4b
b. Sing with free vocal production, becoming more accurate in pitch.	F4b
c. Add to the repertoire of songs learned at the primary level.	F4b
d. Participate in vocal and/or instrumental ensembles.	F4b
e. Understand basic music notation and terminology.	F4b
f. Refine his/her understanding of the basic elements of music theory.	F4b
g. Recognize and evaluate various types of music and music of various periods and styles, using recorded and live examples.	F2a, F4b
h. Experiment with variations in tempos, timbres, and phrasing for expressive purposes with voice or instruments.	F4b
i. Discuss personal responses to music.	F1a, F4b
CREATIVE MODEL GOALS	
1. If offered at the intermediate level, a course of study in creative movement shall give the student the opportunity to:	
a. Be aware of the thoughts and images evoked by major dance forms.	F4b
b. Develop efficient movements and body awareness for dance and creative movement.	F4b
c. Enjoy freedom of creative and uninhibited movement in a variety of dance experiences.	F4b
d. Participate in various dance forms of other cultures and historical periods.	A2a, F4b
e. Use appropriate vocabulary to show understanding of basic dance concepts.	F1a, F4b
f. Improvise a short study around a mood, message, tool or material, using dance and creative movement.	F4b
g. Develop criteria for forming opinions about dance performances.	F2a, F4b
h. Evaluate the mood or message conveyed by a dance performances.	F2a, F4b

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HEALTH ENHANCEMENT: MODEL LEARNER GOALS: INTERMEDIATE	
HEALTH ENHANCEMENT MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to demonstrate:	
a. A variety of physical skills that influence individual physical development, including but not limited to skills practice and lead-up games, rhythms and dance, and individual dual, or team sports.	C1b, C3
b. An appropriate level of physical fitness in cardiorespiratory function, body composition, and musculoskeletal function.	C3a
c. Positive interpersonal relationships and self-concept.	G2a, G4a
d. An understanding of the importance of regular and sustained physical activity throughout life.	G2b
e. An ability to identify roles, responsibilities, contributions, and life cycles in a family structure.	D1a
2. By the end of the intermediate level, the student shall have had the opportunity to understand:	
a. Substance use and abuse and their effects on the individual and society.	C2d
b. Health problems, including diseases and their etiology, the identification of symptoms of a variety of health problems, and prevention of health problems.	C2c
c. The functions and maintenance of body systems, including knowledge of the reproductive system.	F4
d. The need for and use of consumer health services and products.	F4
e. Basic nutrition and its application.	C1a
f. Cultural, environmental, social, and ethical issues which affect healthy lifestyles.	C1, F4a
g. Interrelationships between physical health and mental well-being.	F4
MATHEMATICS: MODEL LEARNER GOALS: INTERMEDIATE	
MATHEMATICS MODEL LEARNER GOALS: PROBLEM SOLVING	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Recognize, formulate, and solve problems in mathematical and real-life situations.	F2a, F3a
b. Apply a variety of strategies to solve one-step, multi-step, and nonroutine problems.	F2a, F3a
c. Verify and interpret the results with respect to the original problem situation and generalize to new problem situations.	F2a, F3a
MATHEMATICS MODEL LEARNER GOALS: COMMUNICATION	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Model situations in a variety of ways (e.g., verbal, concrete, pictorial, graphical, algebraic)	F1a, F3a
b. Read, interpret, and evaluate mathematical expressions of ideas.	F3a, F3b
c. Discuss mathematical ideas and situations, and make convincing arguments.	F3a
MATHEMATICAL MODEL LEARNER GOALS: REASONING	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Recognize examples of deductive and inductive reasoning.	F2a
b. Make and validate conjectures using models, known facts, properties, and relationships.	F3a
c. Apply proportional reasoning in problem solving and in discovering mathematical concepts.	F2a, F3a
NUMERATION, COMPUTATION, AND ESTIMATION MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Represent and use equivalent forms of numbers (fraction, decimal, percent, exponential, and scientific notation) in real world and mathematical situations.	F3a
b. Apply relationships between fractions, decimals, and percents.	F3a
c. Apply ratio, proportion, and percent.	F3a

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d. Represent numerical relationships in one- and two-dimensional graphs.	F3a
e. Demonstrate operations, order relations, and number sense for whole numbers, fractions, decimals, and integers.	F3a
f. Apply basic number theory concepts.	F3a
g. Analyze, explain, and use procedures for addition, subtraction, multiplication, and division of whole numbers.	F3a
h. Select and use an appropriate method for computing from among mental arithmetic, paper and pencil, calculator, and computers.	F3a, F5a
i. Analyze, explain, and use estimation techniques.	F2a, F3a
j. Use estimation to check reasonableness of results.	F3a
MEASUREMENT MODEL LEARNER GOALS:	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Estimate, make and use measurements to describe, compare, or contrast objects in real world situations.	F3a
b. Select appropriate units and tools to measure to a level of accuracy required in a particular setting.	F3a
c. Use the customary and metric systems of measurement.	F3a
d. Demonstrate the concepts of perimeter, area, and volume through concrete experiences.	F3a
e. Apply procedures and formulas to determine area and volume.	F3a
GEOMETRY MODEL LEARNER GOALS: INTERMEDIATE	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Identify, describe, construct, and compare plane and solid geometric figures.	F3a
b. Understand geometric relationships and their consequences.	F3a
c. Demonstrate an intuitive understanding of transformational geometry.	F3a
d. Use geometry to describe the physical world.	F3a
STATISTICS AND PROBABILITY MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Systematically collect, organize, and describe data.	F3a, F4
b. Construct, read, and interpret tables, charts, and graphs such as stem-leaf, line, and box-whisker plots.	F3a, F4
c. Draw inferences and construct and evaluate arguments based on data analysis.	F2a, F3a
d. Devise and carry out simulations involving probability.	F3a
e. Construct sample spaces and determine the theoretical and experimental probabilities of events.	F3a
f. Make predictions based on experimental results or mathematical probabilities.	F3a
ALGEBRA MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Use the concepts of variable, expression, and equation.	F3a
b. Represent concrete situations and number patterns with tables, graphs, verbal rules, and equations.	F3a
c. Analyze tables and graphs to identify properties and relationships.	F2a, F3a
d. Solve linear equations using concrete, informal, and formal methods.	F2a, F3a
e. Use models to demonstrate inequalities and non-linear equations.	F3a
f. Use calculators and computers to explore algebraic concepts.	F3a, F5a
SCIENCE: MODEL LEARNER GOALS: INTERMEDIATE	
GENERAL SCIENCE MODEL LEARNER GOALS: INTERMEDIATE	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Develop a positive attitude toward science.	F4a
b. Use basic scientific skills to solve problems and answer questions about the environment.	F2a, F4a

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c. Work independently an din groups in the classroom, laboratory, and in the field.	F4a, G4b
d. Identify and state a problem and use scientific processes to resolve it .	F2a, F4a
e. Use tools and equipment for observations and measurement in a safe and appropriate manner.	F4a
f. Gather and convey information through oral, written, and graphic communication.	F1a, F3c, F4a
g. Be aware of the basic concepts in the life, physical, earth, and environmental sciences.	F4a
h. Be aware of careers in the sciences and the skills needed for jobs in science related fields.	A2f, F4a
i. Cite and investigate scientific and technological issues which affect our lives.	F4a
j. Properly care for living organisms and show respect for life and property.	F4a
k. Be aware of the need for conservation, preservation, and the wise use of natural resources.	F4a
LIFE SCIENCE MODEL LEARNER GOALS	
1. A course of study in life science, offered at the intermediate level, shall give the student the opportunity to:	
a. Appreciate all living things and their relationships to one another and the environment.	F4a
b. Observe, describe, compose, conclude, infer, and record from classroom, laboratory, and field experiences.	F1a, F2a, F3c, F4a
c. Be aware of some of the contributions of scientists working in life science and of careers in life science.	F4a
d. Demonstrate knowledge of kingdoms of living things and their basic characteristics, functions, diversity, and economic importance.	F4a
e. Understands levels of biological organizations, growth and development.	F4a
f. Demonstrates knowledge of reproductive processes, genetics, and heredity of living things.	F4a
g. Demonstrate knowledge of local flora and fauna.	F4a
h. Demonstrate knowledge and understanding of human growth and development, including the nine body systems and their functions, heredity and population genetics, behavior, and social and emotional growth.	F4a
i. Be familiar with laboratory tools and techniques used in life science.	F4a
j. Understand the interdependence of biological systems as they affect social issues.	F4a
PHYSICAL SCIENCE MODEL LEARNER GOALS	
1. A course of study in physical science, offered at the intermediate level, shall give the student opportunity to:	
a. Understand and use basic measurements in science, including charting, graphing, and interpreting measurable data.	F4a
b. Design and carry out experiments that demonstrate physical and chemical changes.	F4a
c. Identify physical and chemical characteristics of various types of matter.	F4a
d. Understand and explain models of atoms, molecules, compounds, and mixtures.	F4a
e. Understand physical, chemical, and nuclear changes using the laws of conservation of matter and energy.	F4a
f. Understand the basic characteristics of light, sound, and mechanical waves.	F4a
g. Understand the scientific principles and technological applications of the laws of motion	F4a
h. Understand the interrelationships of solar and galactic systems and of the earth-moon-sun system.	F4a
i. Demonstrate a workable knowledge of electricity and electronics and understand their importance to our human environment.	F4a
j. Apply basic physical and chemical principles to describe changes in common substances and devices.	F4a
k. Understand the effects of science and technology on humans and the environment.	F4a
l. Be aware of careers in the physical sciences.	A2f, F4a
EARTH SCIENCE MODEL LEARNER GOALS	
1. If offered, a course of study in earth science shall give the student the opportunity to:	
a. Understand the basic concepts of each science, including astronomy, geology, oceanography, and paleontology.	F4a
b. Understand the basic motions in the solar system and how they affect the earth's environment	F4a

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c.	Understand the earth's history through the rock and fossil record and scientific dating methods.	F4a
d.	Understand the earth's tectonic and structural forces.	F4a
e.	Understand the earth's internal and surface processes, including weathering, erosion, volcanism, and deformation.	F4a
f.	Understand the use of aerial photos, topographic and geologic maps, and survey systems.	F4a
g.	Understand the earth's composition, including rocks and minerals.	F4a
h.	Understand the physical and compositional changes of the earth's weather and climate.	F4a
i.	Understand the oceans and their characteristics and development.	F4a
j.	Understand surface water and ground water systems.	F4a
k.	Understand that the flow of energy is basic to all earth science disciplines.	F4a
l.	Use the tools and methods employed by earth scientists, through field and laboratory experiences.	F4a
m.	Demonstrate how earth science relates to careers, personal uses, and social needs.	A2f, F4a
	BIOLOGY MODEL LEARNER GOALS	
1.	If offered a course of study in biology shall give the student the opportunity to:	
a.	Use scientific methods to investigate biological phenomena.	F4a
b.	Relate field experiences to an understanding of ecological principles.	F4a
c.	Use microscopes, balances, and other biological instruments.	F4a, F5a
d.	Apply biological principles to situations in daily life.	F4a
e.	Understand the characteristics processes which define life.	F4a
f.	Understand the relationship between organic compounds and the physiological needs of living organisms.	F4a
g.	Understand the relation and interdependence of cell respiration and photosynthesis to food chains.	F4a
h.	Understand the concepts of homeostasis in cells, individuals, populations, communities, and ecosystems.	F4a
i.	Understand cellular transport, cell structure, and cell functions.	F4a
j.	Understand sexual and asexual reproduction and their relationship to ecological balances.	F4a
k.	Understand heredity and the application of modern technology in medical genetics.	F4a
l.	Understand the structure of DNA, its relationship to protein synthesis, and its role in living systems.	F4a
m.	Understand the theory of evolution and its relationship to adaptation and speciation.	F4a
n.	Categorize organisms representing the various kingdoms according to phyla.	F4a
o.	Understand the relationship between structure and function as they relate to living things.	F4a
p.	Trace the developments of the major live functions through the various kingdoms.	F4a
q.	Understand the importance of microbes and their relationship to other organisms.	F4a
r.	Understand the importance of current issues in biology.	F4a
s.	Be aware of careers in biology.	A2f, F4a
t.	Use appropriate safety techniques when handling chemicals, equipment, and organisms.	C2a, F4a
	CHEMISTRY MODEL LEARNER GOALS	
1.	If offered, a course of study in chemistry shall give the student the opportunity to:	
a.	Be competent in laboratory skills, including setting up equipment and using materials and chemicals safely.	C2a, F4a
b.	Understand atomic structure and periodicity.	F4a
c.	Understand the phases and properties of matter, including solids, liquids, and gases.	F4a
d.	Understand the mole concept and stoichiometry and demonstrate their practical use in the laboratory.	F4a
e.	Understand bonding and energy relationships.	F4a
f.	Use formulas and equations competently.	F4a
g.	Understand acids, bases, solubility, and chemical equilibrium.	F4a
h.	Understand the basic principles of thermodynamics and kinetics.	F4a
i.	Understand oxidation and reduction.	F4a

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j. Understand basic organic, nuclear, and radiochemistry.	F4a
k. Understand the role of chemistry in society and technology.	F4a
l. Be able to apply chemistry principles to situations in daily life.	F4a
m. Be aware of careers in chemistry and related fields.	A2f, F4a
PHYSICS MODEL LEARNER GOALS	
1. If offered, a course of study in chemistry shall give the student the opportunity to:	
a. Solve problems in physics, using mathematics and critical thinking skills.	F2a, F4a
b. Collect, analyze, and interpret physical data.	F4a
c. Use the appropriate instruments to measure physical quantities in a laboratory setting.	F4a
d. Understand the historic, social, and scientific events that contributed to the developments of physics.	F4a
e. Understand that physics is a dynamic field in which concepts change as new data and new relationships are discovered.	F4a
f. Understand the character and central role of conservation principles such as momentum, energy, and electric charge.	F4a
g. Cite similarities and differences of wave and particle phenomena in nature.	F4a
h. Demonstrate a basic knowledge of modern physics concepts such as relativistic effects, nuclear radioactivity, and wave-particle duality	F4a
i. Understand the basic principles of electricity and magnetism and their application to common occurrences.	F4a
j. Cite accepted explanations for common terrestrial and celestial observations, using the laws of motion.	F4a
k. Understand that the flow of energy is basic to all physical phenomena.	F4a
l. Understand the basic concepts of geometric and physical optics.	F4a
m. Understand the basic character of the, temperature, and internal (thermal) energy.	F4a
n. Evaluate the impact of discoveries in physics.	F4a
o. Be aware of careers in physics and related fields.	A2f, F4a
p. Understand the importance of physics in current social issues and its application to the other sciences.	F4a
q. Be able to apply physics principles to situations in daily life.	F4a
SOCIAL STUDIES: MODEL LEARNER GOALS: INTERMEDIATE	
HISTORY AND WORLD CULTURE MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Explain how technology, economic activities, and learner patterns of behavior, such as prejudice, discrimination, conformity, and acceptance influence culture.	F4a
b. Demonstrate knowledge of the dynamics of preindustrial, transitional, industrial, and postindustrial societies.	F4a
c. Explain how the characteristics of culture are manifested in history, economics, government, arts, sciences, and religion.	F4a
d. Detail how invention, diffusion, and adaptation influence cultural change.	F4a
e. Explain the biological, affectual, economic, and social functions of families.	F4a
f. Demonstrate a knowledge of Montana history and of the state's diverse cultures.	F4a
LAW AND LEGAL RIGHTS MODEL LEARNER GOAL	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. List the functions of the three branches of government.	F4a
b. Explain the need for and function of separation of powers and checks and balances.	F4a
c. List the individual rights protected by the first ten amendments to the U.S. Constitution.	F4a
d. Give reasons why the Bill of Rights was added to the Constitution.	F4a
e. Explain how constitutional change is made.	F4a
f. Discuss the characteristics of federalism.	F4a
g. Identify how laws emanate from various authorities.	F4a

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h. Explain the need for and provision of due process of law.	F4a
k. Discuss the fundamental principles of American democracy.	F4a
l. Continue his/her involvement in community groups, organizations, or services.	A2e, E3c
ECONOMICS MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Discuss the importance of economic goals, such as growth, employment, and efficiency.	F4a
b. Discuss the importance of economic problems such as scarcity, credit, and resource allocation.	F4a
c. Detail the relationship between specialization and careers and occupations.	F4a
d. List the basic resources of production.	F4a
e. Explain market interrelationships, such as cost/benefit, trade-offs, and distribution of goods and services.	F4a
f. Detail the characteristics of market and command economic systems and traditional economies.	F4a
GEOGRAPHY MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Discuss the interrelationships of environments, cultures, and weather and how people adapt to them.	F4a
b. Explain the relationship of the earth and sun.	F4a
c. Locate geographic positions, using latitude, longitude, strategic sites, and maritime and time zones.	F4a
d. Detail the effects of ocean currents, wind, mountains and other physical and climatic elements on weather.	F4a
e. Explain the impact of geography on human settlement patterns.	F4a
f. Detail and discuss the characteristics of Montana geography and locate critical sites.	F4a
SOCIAL INSTITUTIONS MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Discuss and give examples of the reasons for socialization.	F4a
b. Explain how basic differences between individual values and group norms impact social problems.	F4a
c. Explain the relationship of economics, politics, science, and religion to social institutions.	F4a
d. List examples of social interaction, such as peer pressure, group dynamics, assimilation, and accommodation.	F4a
e. Discuss how societies implement social control.	F4a
CRITICAL THINKING, PROBLEM SOLVING, AND DECISION MAKING MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Summarize information by combining critical concepts into statement of conclusions and by stating a hypothesis.	F2a
b. Synthesize information by proposing a new plan or system and reinterpreting events in terms of what might have happened.	F2a
c. Use social and political participation skills to communicate effectively, recognize mutual relationships, set goals, plan, organize, and make decisions; keep informed, cooperate, negotiate, compromise, and accept responsibility.	A2, C, D, F2a, G4b
STUDY AND RESEARCH SKILLS MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Skim, outline, review, and take notes.	F4
b. Use the library and other resources for research, refine topic selection and organize and present information in written formats to verify data.	F3c, F4
c. Use technology appropriately, including databases.	F5a

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VOCATIONAL/PRACTICAL ARTS: MODEL LEARNER GOALS: INTERMEDIATE	NCEO CODE
GENERAL VOCATIONAL/PRACTICAL ARTS MODEL LEARNER GOALS	
1. By the intermediate level, the student shall have had the opportunity to:	
a. Be aware of wide variety of careers and postsecondary experiences.	A2f
b. Have a working knowledge of the skills, responsibilities, and applications of vocations.	A2f
c. Build technical literacy skills.	F4
d. Develop a work ethic, which includes an understanding of the importance of health, time, money, and scarce resource management to life an work.	C1, F4
e. Understanding and appreciate the values of cooperation and positive attitude in the world of work and an appreciation for quality workmanship.	G4b
f. Demonstrate the relationship between academic knowledge and practical application.	F
g. Consistently demonstrate basic concepts, skills, attitudes, and values in traffic education.	F4
PERSONAL/ADULT LIVING SKILLS MODEL LEARNER GOALS	
1. If offered, a course of study in personal/adult living skills shall give the student the opportunity to:	
a. Identify the responsibilities and privileges that characterize adulthood; recognize various roles of adults; and recognize skills and processes essential to functioning as an adult.	F4
b. Given a problem situation, describe how the decision would be made if each of the processes and rules of decision making were followed.	F2a, F4
c. Given a description of how decisions were made in allocating resources, identify principles of resource use applied in the decision.	F2a, F4
d. List personal motivational sources and explain how they relate to personal management.	F4
e. Describe the benefits of a positive self-concept.	F4
f. Identify lifestyle choices as they exist today.	F4
g. Identify and describe stages of individual development and analyze family function in relation to that stage.	F4
h. Identify legal and moral commitments in beginning and ending a relationship.	F4
i. Explain the social and psychological forces involved in mate selection.	F4
j. Analyze male and female roles in a marriage.	F4
k. Identify issues and individual and his/her future mate should discuss prior to marriage.	F4
l. Describe family roles, functions, and interactions.	F4
m. Recognize the normalcy and function of conflict in marriage and assess the resources available to help coupes resolve conflict.	F4
n. Describe the effect of employment of family life.	F4
o. Interpret his/her attitude toward divorce as it will affect attitudes toward marriage.	F4
p. Identify several factors involved in the decision to parent.	F4
q. Describe child abuse and neglect; analyze causes and effects of child abuse and neglect; and identify services and legal aid available to the abused and abuser.	F4
r. Interpret the role patters of foster, adoptive, and step-parents.	F4
s. Describe reasons for one-parent families.	F4
t. Describe the growth and development of infants and children.	F4
u. Describe the important influences on prenatal development.	F4
v. Identify problem behavior in children in an effort to determine the goal of misbehavior and suggest positive techniques for guiding children's behavior.	F4
w. Identify personal and family crises and describe resources which can help in coping with crisis.	F4
x. Analyze the wise use of credit.	F4
y. Design a budget for managing income and expenses.	F4
z. Identify the financial services available to manage personal income.	F4
aa. Appraise his/her need for life, health, auto, and property insurance.	F4
bb. Evaluate housing choice based on personal needs.	F4

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AGRICULTURAL EDUCATION MODEL LEARNER GOALS	
1. If offered, a course of study in agriculture shall give the student the opportunity to:	
a. Be able to select self-employment or an appropriate career in the area of agricultural business and production.	F4
b. Display leadership, citizen, and cooperation developed through membership and participation in civic and vocational organizations.	A2a, A2b, E1a
c. Demonstrate knowledge, skills, attitudes, and practical experience as determined through task analysis for self-employment in:	A2f, F4
i. Basic soils management; plant growth and reproduction; field crop production, marketing, and management; range management; horticulture; and forestry.	A2f, F4
ii. Selection, breeding, and rearing of commercially important species of livestock; animal nutrition, health, and care; and the profitable management and marketing of livestock.	A2f, F4
iii. Agricultural mechanization, including safety and care of hand and power tools, welding equipment, basic electricity, basic and applied power farm machinery.	A2f, F4
iv. Agricultural management, marketing, and economic principles; and business financial planning, including leasing, credit, depreciation, and machinery economics.	A2f, F4
v. Propagation, management, and marketing of economically important horticulture crops.	A2f, F4
vi. Forestry production, transportation, processing, marketing, and distribution.	A2f, F4
BUSINESS AND OFFICE EDUCATION MODEL LEARNER GOALS	
1. If offered, a course of study business and office education shall give the student the opportunity to:	
a. Demonstrate the skills needed to apply for and obtain employment in one of the appropriate occupational areas (accounting, bookkeeping, banking, data processing, office supervision and management, secretarial, typing, general office, word information processing, electronic communications, general business, and related occupations).	F4
b. Demonstrate knowledge of society's business economy and consumer systems.	F4
c. Use equipment and technology that is currently used by industry.	F4, F5a
d. Demonstrate the knowledge, skills, and attitudes necessary and appropriate for the business world.	F4
e. Adapt and adjust to the changing needs and requirements of his/her occupation and of the business world in general, using tools such as employment projections and predictions.	F4
f. Display leadership, citizenship, and cooperation developed through membership and participation in civic and vocational organizations.	A2a, A2b, E1a
g. Develop an understanding of the importance of lifelong learning and continued acquisition of appropriate skills.	F4
HOME ECONOMICS AND HOME ECONOMICS WAGE EARNING MODEL LEARNER GOALS	
Home economics education provides skills for home and family living and prepares students for home economics wage earning occupations.	
Consumer and homemaking programs help students establish and maintain a successful home and family life. Students learn management, priority setting, and interpersonal relationships skills in child development, family relations, clothing and textiles, foods and nutrition, housing, and consumer education.	
Wage earning income home economics provides education for gainful employment in an occupation related to home economics. Wage earning programs are offered through secondary coursework and on-the-job experience.	
1. If offered, a course of study in home economics shall give the student the opportunity to:	
a. Be able to use skills which improve the quality of individual and family life.	F4
b. Apply effective strategies for his/her future roles as employee/employer and home manager.	F4
c. Use technology to meet personal and family needs.	F4, F5a
d. Use applied learning to develop transferable job skills.	F4
e. Develop an awareness of careers related to home economics.	A2f, F4

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f. Understand the world of work through entrepreneurship.	F4
g. Understand the role of home economics and the family in economic development and worker productivity.	F4
h. Develop consumer competence.	F4
i. Develop leadership through civic and vocational organizations.	D, E, F4
PREVOCATIONAL INDUSTRIAL/TECHNOLOGY EDUCATION MODEL LEARNER GOALS	
1. If offered, a course of study in prevocational industrial/technology education shall give the student the opportunity to:	
a. Be able to make informed and meaningful career and education choices relating to careers in construction, manufacturing, communication, and power/transportation.	A2f
b. Understand the importance of technology as it affects work and daily life, including the use of tools, how science and technology are related, and the ethical, sociological, and environmental issues technology has raised.	F4, F5a
c. Understand that technology influences the future and requires personal and occupational adjustment.	F4
d. Work with tools, materials, processes, and technical concepts safely and efficiently.	C1a, F4
e. Make wise consumer decisions.	F4
VOCATIONAL INDUSTRIAL EDUCATION MODEL LEARNER GOALS	
1. If offered, a course of study in vocational industrial education shall give the student the opportunity to:	
a. Perform entry-level tasks and possess the skills and knowledge of current technology necessary to succeed in a trade or industrial occupation equivalent to a second-year apprentice level.	A2f, F4
b. Use tools and equipment safely and promote a work environment that reduces hazard.	C1a, F4
c. Demonstrate knowledge of the related science and math concepts and communication skills.	C1a, F3a, F4, F4a
MARKETING EDUCATION MODEL LEARNER GOALS Marketing education gives student the training and direct experiences needed for meaningful work and lifelong learning in whole sale and retail marketing. It prepares students to improve marketing practices; contribute to their community's economic development; and understand the value and responsibilities of entrepreneurism.	
1. If offered, a course of study in marketing shall give the student the opportunity to:	
a. Identify careers in marketing and in the interests, aptitudes, personal qualities, and other information necessary to make informed career choices.	F4
b. Demonstrate the skills needed to successfully obtain and maintain employment in marketing occupations.	D, F4
c. Identify the basic features of the American economic system and their impact on business practices.	F4
d. Understand the purpose and use of marketing research.	F4
e. Identify the main types of business ownership and the elements needed for a successful business venture.	F4
f. Apply fundamental mathematics skills to problems encountered in marketing occupations.	F3a, F4
g. Understand how to purchase goods for resale and the terminology used by product buyers.	F4
h. Understand merchandise handling and inventory procedures used in businesses.	F4
i. Apply the elements of design and principles of arrangement to the sales promotion areas of advertising and display.	F4
j. Demonstrate how to satisfy customer needs through the use of selling techniques.	F4
k. Complete and record sales transactions accurately.	F4
l. Apply management theories to business situations.	F4
TRAFFIC EDUCATION MODEL LEARNER GOALS	
1. Traffic education shall be an integrated K-12 curriculum that develops the concepts, skills,	C2d, F4

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attitudes and values needed for a lifetime of safe, drug-free, courteous, and efficient use of roadways, as a passenger, pedestrian, bicyclist, or motor vehicle operator.	
2. If offered, a course study in traffic education shall give the student the opportunity to:	
a. Demonstrate an awareness that one's physical, emotional, and mental health are essential to the proper use of streets and highways.	F4
b. Use the fundamental processes learner in earlier years.	F4
c. Understand how to use road maps, how to read and interpret instructions, and how to compute speed and stopping distances; understand the laws of motion.	F4
d. Understand that a person who can operate a vehicle safely and efficiently is a worthy family member, since American families depend on the automobile for a variety of occupational and recreational uses.	F4
e. Be prepared to use motor vehicle for occupational and recreational purposes.	F4
f. Develop a good citizenship by complying with laws; by exercising civic responsibility for improving laws through legislation; and by practicing the habits of fair play, courtesy, and maintenance of property.	F4
g. Understand a driver's responsibility for the safety of others and exercise a respect for road ethics and the law.	E1, F4
LIBRARY/MEDIA: MODEL LEARNER GOALS: INTERMEDIATE	
INFORMATION ACCESS MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have been given the opportunity to:	
a. Be aware of the types of libraries and of the unique nature of libraries in a free society.	F4
b. Locate materials which fulfill assignments and satisfy personal interests.	F4
c. Be aware of types of basic reference sources (encyclopedias, dictionaries, almanacs, atlases, periodical indexes, subject encyclopedias, subject dictionaries and data bases).	F4
d. Gather , analyze, select, and use materials.	F2a, F4
e. Select a topic, find a variety of information sources on that topic, summarize, paraphrase, evaluate, synthesize, and present the information in a new form while citing sources.	F2a, F4
f. Identify sources of information in the community.	F4
INFORMED AND CREATIVE USE OF MEDIA AND TECHNOLOGY MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Request information in a variety of formats and from a variety of technologies; select formats appropriate for his/her learning style.	F5a
b. Use technology for the creative expression of ideas.	F5a
c. Begin to evaluate appropriate print and nonprint media for accuracy, relevance, and bias.	F2a
d. Appreciate aesthetically a variety of media.	F4b
e. Understand that many people, such as authors, illustrator, and publishers, collaborate in the production of books and other media and own the material through copyrights.	F4b
GUIDANCE: MODEL LEARNER GOALS: INTERMEDIATE	
GUIDANCE: PERSONAL DEVELOPMENT MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to develop:	
a. A sense of conscience, morality, personal value, and self-worth.	E, G2a
b. A positive and realistic self-concept.	F2a
c. An acceptance of sexuality and physical image.	F4
d. Self-direction and independence.	D1, D3e
e. Appropriate ways to express feelings.	G1a, G1b
f. Strong decision-making skills and an acceptance of responsibility for his/her decisions.	D
GUIDANCE: SOCIAL DEVELOPMENT MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	

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a. Gain a sense of social recognition.	G4a
b. Have the opportunity to establish close peer relationships.	G4a
c. Recognize and respect the fact that different people have different values and systems of values.	G3b
GUIDANCE: EDUCATIONAL DEVELOPMENT MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to develop:	
a. Skills with which to form goals.	D3e, F4
b. An awareness of the need for lifelong learning.	F4
c. Motivation for achievement of personal goals.	D3e
GUIDANCE: CAREER DEVELOPMENT MODEL LEARNER GOALS	
1. By the end of the intermediate level, the student shall have had the opportunity to:	
a. Assess individual values, interests, aptitudes, and abilities and their relationship to career development.	A2f
b. Increase his/her understanding of the components of career planning.	A2f
c. Begin in-depth exploration of career fields and specific occupations.	A2f

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Documents Utilized

Mathematics and Science Frameworks for Nebraska Schools (March, 1994)
Nebraska Schools Accountability Commission's Draft Report (revised February, 1994)

Background

The state department of education began developing curriculum frameworks in the fall of 1994. Content standards have been completed in agricultural education, business education, mathematics, and science. Standards are in draft form or being written in family and consumer science, foreign languages, industrial technology, social studies, and the visual and performing arts. The goal is to have all currently funded frameworks completed by fall 1996. Standards in language arts and marketing will be developed when funding is available. The curriculum frameworks describe student learning for grades pre-K-5, 6-8, and 9-12 and are voluntary. There are no state assessments.

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MATHEMATICS AND SCIENCE FRAMEWORKS	NCEO CODE
OVERVIEW OF K-12 SCIENCE, MIDDLE LEVEL	
MATTER	
PATTERNS OF CHANGE:	
Compare and contrast properties of reactants and their compounds.	F4a
ENERGY:	
Experiment to discover that energy is involved in chemical and physical changes.	F4a
Relate energy of motion to phases.	F4a
SYSTEMS & INTERACTIONS:	
Predict chemical interactions using the periodic table.	F4a
Investigate effect of temperature and pH on reaction rates.	F4a
SCALE & STRUCTURE:	
Compare atomic/molecular structure with their properties.	F4a
FORCE AND MOTION	
PATTERNS OF CHANGE:	
Investigate inertia.	F4a
Explore gravitational force.	F4a
ENERGY:	
Investigate transformation and ways to conserve energy.	F4a
SYSTEMS & INTERACTIONS:	
Investigate the interaction between electricity and magnetism.	F4a
SCALE & STRUCTURE:	
Construct simple and compound machines.	F4a
UNIVERSE	
PATTERNS OF CHANGE:	
Map Nebraska weather patterns.	F4a
Analyze human effect on the environment.	F4a
ENERGY:	
Demonstrate effect of solar energy on seasons, climate, and life on earth.	F4a
SYSTEMS & INTERACTIONS:	
Model movements of the solar system.	F4a
Research and debate possibility of life on other planets.	F4a
SCALE & STRUCTURE:	
Model sedimentary rock formation.	F4a
Estimate distance to moon and sun.	F4a

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DIVERSITY	
PATTERNS OF CHANGE:	
Quantify change over time.	F4a
Construct and use a dichotomous key.	F4a
ENERGY:	
Predict consequences of availability/location of natural resources.	F4a
SYSTEMS & INTERACTIONS:	
Analyze food webs in various environments.	F2a, F4a
Investigate the effect of habitat destruction and resources on diversity.	F4a
SCALE & STRUCTURE:	
Compare structure and function of life forms.	F4a
Differentiate between similar organisms.	F4a
CELLS AND HEREDITY	
PATTERNS OF CHANGE:	
Investigate significance of selective breeding.	F4a
Discover similarities of normal and abnormal cell division.	F4a
ENERGY:	
Investigate transfer of energy in living things.	F4a
SYSTEMS & INTERACTIONS:	
Relate specific traits and environmental conditions to survival.	F4a
Demonstrate how materials move in and out of cells.	F4a
SCALE & STRUCTURE:	
Observe different kinds of cells and discuss similarities and differences.	F4a
Relate cell structure to function.	F4a
INTERDEPENDENCE	
PATTERNS OF CHANGE:	
Investigate the impact of forces that change the earth.	F4a
Predict and illustrate significance of cycles to life on earth.	F4a
ENERGY:	
Compare energy flow in various ecosystems.	F4a
SYSTEMS & INTERACTIONS:	
Investigate the relationship of abiotic and biotic factors and their effect on population.	F4a
SCALE & STRUCTURE:	
Relate biomes to ecosystems.	F4a
OVERVIEW OF K-12 MATHEMATICS, MIDDLE LEVEL/7-8	
NUMBER SENSE	
ESTIMATION:	
Verify and apply number properties (communicative, associative, and distributive).	F3a
PROBLEM SOLVING:	
Explore proportional relationships to solve problems.	F2a, F3a
Record shortcuts and hints for problem solving.	F2a, F3a
TECHNOLOGY:	
Use technology to explore scientific notation, exponents, and order of operation.	F3a, F5a
COMMUNICATIONS:	
Describe, evaluate, and record relationships between various numerical representations.	F2a, F3a
CONNECTIONS:	
Use appropriate numerical representations and symbols for information gathered from all disciplines.	F3a
REASONING/LOGIC:	
Explore absolute values, order of operations, and number properties.	F3a
MEASUREMENT	
ESTIMATION:	
Analyze precision in measurement.	F3a

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Estimate measure of angles, line segments, and curved surfaces.	F3a
Choose appropriate units.	F3a
PROBLEM SOLVING:	
Create concrete models as a tool to solve problems.	F2a
TECHNOLOGY:	
Select and use appropriate tools.	F3a
Investigate the effects of measurement changes using technology.	F3a
COMMUNICATIONS:	
Present various methods of solving measurement problems using standard and nonstandard units of measurement.	F3a
CONNECTIONS:	
Demonstrate mapping skills.	F3a
Investigate historical use of measurement.	F3a
Select and use appropriate units to measure quantities in other disciplines.	F3a
REASONING/LOGIC:	
Justify chosen unit of measurement.	F3a
SPATIAL RELATIONSHIPS/GEOMETRIC TOPICS	
ESTIMATION:	
Predict and compare properties of geometric models.	F3a
Estimate square roots.	F3a
Estimate perimeter, area, and volume.	F3a
PROBLEM SOLVING:	
Use transformations to visualize spatial relationships.	F2a, F3a
Calculate distances and classify triangles.	F3a
Explore and apply perimeter, area, and volume.	F3a
TECHNOLOGY:	
Explore and create constructions using software.	F3a. F5a
Calculate and compare perimeter, area, and volume.	F3a
COMMUNICATIONS:	
Use relevant geometric vocabulary and properties.	F3a
Classify geometric shapes including polyhedra.	F3a
Justify the logic of constructions.	F3a
Use geometry to describe the physical world.	F3a
CONNECTIONS:	
Relate formulas to models.	F3a
Investigate contributions of Pythagoras and Euclid.	F3a
Use geometry to describe physical world.	F3a
REASONING/LOGIC:	
Recognize flips, slides, and turns.	F3a
Use spatial relationship to make comparisons.	F3a
DATA ANALYSIS	
ESTIMATION:	
Estimate the probability of events.	F3a
Predict graphic representations of data.	F3a
PROBLEM SOLVING:	
Experiment with probability.	F2a, F3a
Make predictions.	F2a, F3a
Collect, organize, represent, and describe data.	F1, F3a
TECHNOLOGY:	
Explore and produce graphic representations of data using calculators and computers.	F3a, F5a
Calculate, analyze, and measure central tendency (mean, median, mode, range).	F3a, F5a
COMMUNICATIONS:	
Describe data using graphic representations.	F3a
Read tables and form conclusions.	F3a
Record and present relationships and results of data analysis.	F3a

Nebraska

	NCEO CODE
CONNECTIONS:	
Systematically collect, organize, interpret, and explore data in all disciplines.	F3a
Determine implications and consequences of the displayed data.	F3a
REASONING/LOGIC:	
Investigate concepts of probability.	F3a
Verify and interpret data.	F3a
Explore concepts of randomness.	F3a
PATTERNS AND FUNCTIONS	
ESTIMATION:	
Formulate and test hypotheses.	F2a, F3a
PROBLEM SOLVING:	
Apply Venn diagrams to objects and groups for classification.	F2a, F3a
Create tables of values to determine patterns.	F2a, F3a
Develop efficient networking schemes to solve problems.	F2a, F3a
TECHNOLOGY:	
Use graphic utilities and numeric processing software to verify function values and investigate patterns.	F3a, F5a
COMMUNICATIONS:	
Investigate relationships between functions and their graphs.	F3a
Describe functions and patterns.	F3a
Recognize and describe patterns found in the world.	F3a
CONNECTIONS:	
Explore use and formation of tessellations.	F3a
Explore functions and patterns in art and other disciplines.	F3a
Explore networks in other disciplines.	F3a
REASONING/LOGIC:	
Interpret Venn diagrams.	F3a
Discover and develop formulas.	F3a
ALGEBRAIC TOPICS	
ESTIMATION:	
Check reasonableness of solutions.	F3a
PROBLEM SOLVING:	
Solve basic linear equations form practical applications.	F2a, F3a
Solve systems of equations by graphing.	F2a, F3a
Perform polynomial operations with manipulatives.	F2a, F3a
TECHNOLOGY:	
Use appropriate tools to show relationships between quantities.	F3a, F5a
Verify results of substituting variables.	F3a, F5a
COMMUNICATIONS:	
Discuss relationships between quantities (time vs. speed).	F3a
Use proper symbols and terminology.	F3a
CONNECTIONS:	
Determine relationships between quantities (direct vs. inverse).	F3a
REASONING/LOGIC:	
Apply inequalities.	F3a
Explore multiple solutions.	F3a
DISCRETE MATHEMATICS	
Foundations are laid for many advanced topics in the middle level. These topics include, but are not limited to, right angle trigonometry (sine, cosine, tangent) and graphing calculators.	F3a
ADVANCED TOPICS	
Foundations are laid for many advanced topics in the middle level. These topics include, but are not limited to, right angle trigonometry (sine, cosine, tangent) and graphing calculators.	F3a, F5a

New Hampshire

Document Utilized

The CRM Student Outcome Information System (printed by the Center for Resource Management; no date)

Background

In 1993, the legislature passed the New Hampshire Educational Improvement and Assessment Act. The law required the state to define what students should know and be able to do in language arts and mathematics in elementary school, and in language arts, math, science and social studies in middle and high schools. The Center for Resource Management, Inc., a private agency in partnership with the New Hampshire Department of Education Bureau of Special Education Services, has developed the Student Outcome Information System that may be used by New Hampshire public schools. The student-level profiles are designed to help school administrators and instructional staff identify the specific students who are experiencing success or who are at risk.

New Hampshire

THE *CRM* STUDENT OUTCOME INFORMATION SYSTEM	NCEO CODE
SCHOOL-LEVEL OUTCOME PROFILES	
All of the outcome profiles described below can be produced for the total or a sample of the school population as well as specific populations such as special education students, Chapter 1 students, or students participating in special programs. Outcome results can also be displayed by grade level and for groupings related to gender, ethnicity, disability, ability level, or academic placement.	
ABSENCE, SUSPENSION, RETENTION, AND DROPOUT PROFILES	
Annual absence rates (average number of students absent each day)	A1a
Number and percent of students with more than maximum allowed absences.	A1a
Annual suspension rates--total school and each grade level.	E1b
Number and percent of students suspended (in-school and out-of-school)	E1b
Number of suspension incidents (in-school and out-of-school)	E1b
Average length of suspension (in-school and out-of-school)	E1b
Average number of suspensions per student	E1b
Number and percent of students suspended two or more times	E1b
Annual retention rates (number and percent of students retained in grade or lacking sufficient credits to advance)	F3e
Annual dropout rates (number and percent of students dropping out of school)	A1
GRADE PERFORMANCE PROFILES	
Number and percent of students receiving satisfactory or above satisfactory grades in each subject area	F
Number and percent of students receiving below satisfactory grades in each subject area	F3e
Number and percent of students receiving two or more As across subject areas	F3d
Number and percent of students receiving two or more Ds across subject areas	F3e
Number and percent of students receiving two or more Fs across subject areas	F3e
TEST AND ASSESSMENT PROFILE	
Student progress and achievement on specific tests and assessments.	A2c

New Hampshire

	NCEO CODE
LONGITUDINAL OUTCOME REPORTS (second year and thereafter)	
Annual comparisons of absence, suspension, retention, and dropout rates	no match
Annual comparisons of student grade performance for each subject area and each grade level.	no match
Annual comparisons of anticipated and achieved percentiles on standardized tests.	no match
STUDENT-LEVEL OUTCOME REPORTS	
The Student-Level Profiles are designed to help school administrators and instructional staff identify the specific students who are experiencing success or who are at risk. Student outcome data can be sorted to produce individual student lists representing specific populations- grade level, gender, disability, special program, ability level, or academic grouping.	
INDIVIDUAL STUDENT LISTS	
Students with maximum number of allowed absences	A1a
Students involved in two or more disciplinary actions or suspension incidents	E1b
Students with above satisfactory grades in two or more subject areas	F3d
Students with below satisfactory grades in two or more subject areas	F3e
Students who withdrew from school by reason for withdrawal	A1
Students retained in grade/lacking sufficient credits to advance by grade level	F3e
Students performing above the level anticipated on tests/assessments	F3d
Students performing below the level anticipated on tests/assessments.	F3e

New Mexico

Document Utilized

New Mexico Competency Frameworks (September, 1992)
New Mexico Standards for Excellence Student Outcomes Literacies and Competency Frameworks (no date)

Background

In September 1992, the state board of education adopted competency frameworks that spell out, in broad terms, what students should know and be able to do in key subjects at the end of 12th grade. In November 1992, the state board also adopted "standards for excellence" that broadly define the literacies, attitudes, and attributes students should know and be able to do upon graduation. Both the competency frameworks and standards for excellence are mandatory and are part of state board of education regulations. The competency frameworks apply to grades K-12; they do not describe student learning at specific grades. The state is currently developing benchmarks for grades 4 and 8. The standards for excellence describe student learning at grade 12.

New Mexico

	NCEO CODE
STANDARDS FOR EXCELLENCE: STUDENT OUTCOMES LITERACIES (MARCH 1993) AND COMPETENCY FRAMEWORKS. (SEPT 1992)	
The standards for Excellence Student Outcomes comprises both literacies and attitudes/attributes. The competency frameworks (in brown [plain text]) are correlated to literacy outcomes (in blue [bold type]). It is our belief that the attitudes and attribute outcomes are embedded through the curriculum.	
KNOWLEDGE, UNDERSTANDING AND APPLICATION OF THE STRUCTURE AND USE OF THE ENGLISH LANGUAGE AS WELL AS OTHER LANGUAGES;	F1, F3, F4
Develop decision-making and communication skills, including the ability to express choices related to health.	C1, F1a
Speak and write using the conventions of correctness, and for a variety of audiences and purposes.	F1a, F3c
Use writing, reading, speaking and listening as tools for learning in all subject areas.	F1a, F3b, F3c
Learn to communicate mathematically, Students should learn to use mathematical language to clarify, refine, and consolidate their thinking so that they can read, write and discuss ideas.	F3a
Communicate proficiently in the language studied, through listening, speaking, reading, and writing in a variety of situations and for a variety of purposes.	F4a
Demonstrate an awareness that the means of expressing ideas and feelings differ from language to language, reflecting the attitudes of a culture.	F4a
Understand that music is a vehicle for communication and self-expression.	F4b
Develop and use communication skills.	F1a, F3
KNOWLEDGE, UNDERSTANDING AND PRACTICAL APPLICATION OF TECHNOLOGY, SCIENCE, MATHEMATICS, SOCIAL STUDIES, THE HUMANITIES, AND THE PRACTICAL ARTS AND THEIR INTERCONNECTIONS THROUGH THE MODES OF READING, WRITING, OBSERVING, SPEAKING, LISTENING, MOVEMENT, AND THE ARTS;	F3a, F3b, F3c, F4a, F4b, F5a
Demonstrate media skills through manipulation of various materials and techniques, through care of tools, familiarity with a wide variety of artistic materials and techniques, and safety in the classroom.	C2a, F4b
Read, write, and perform arithmetic and mathematical operations, listen and speak in the medium in which business is conducted.	F1a, F3a, F3b, F3c

New Mexico

	NCEO CODE
Learn to value mathematics. Students need experiences related to the cultural, historical, scientific, and technological evolution of mathematics so that they can appreciate the role of mathematics in the development of a society and explore, apply and exhibit relationships among mathematics and the physical and life sciences, the social sciences and the humanities.	F3a
5-8 number sense and relationships, number systems and number theory, computation and estimations, patterns and functions, algebra, statistics, probability, geometry, and measurement.	F3a
Understand relationships between music and history.	F4a, F4b
Using topics from all science disciplines:	
Understand energy as it applies to potential sources, forms, conversions, living systems, applications and their effects.	F4a
Understand balance and change through time in natural entities and systems, including different kinds of change.	F4a
Understand structure, for example kinds of structure, organization, relationships among parts and how at different scales different properties are revealed.	F4a
Understand systems and interactions between systems, within systems and subsystems, and among objects.	F4a
Understand that our society and its values are affected by science and technology.	F4a
CREATIVE AND HIGHER ORDER THINKING SKILLS AND PERSONAL ATTITUDES AND ATTRIBUTES LEADING TO ETHICAL DECISION MAKING TO MEET THE CHALLENGES OF LIFE:	E, F2a
Develop the capacity to make thoughtful judgements in art.	G4b
Understand complex interrelationships.	F2a
Recognize the power to reach one's personal potential by making positive health and life choices.	C1
Value family relationships and appreciate the role of each person in creating a positive family environment.	D1a
Value the role of moderation in avoiding excess or deficiency states, including food and exercise.	C1, C3
Understand that every individual human being is valuable and unique.	G3a
Respond personally, analytically and critically to written and spoken language.	F1a, F2a, F3b
Recognize, analyze and respond to propaganda.	F2a
Learn to reason mathematically. Students need to make conjectures, gather evidence, and build arguments to support fundamental mathematical concepts.	F3a
Evaluate another culture fairly and from an informed knowledge base.	F4a
Apply knowledge of musical elements (rhythm, melody, harmony, dynamics, tone, color, form and style) when learning and performing music.	F4b
Use critical thinking skills to discuss and evaluate music.	F2a, F4b
Evaluate and accept the risks and safety factors that may affect physical activity as an important part of one's lifestyle.	C2b, C3
Commit to physical activity as an important part of one's lifestyle.	C1b, C3
Understand, apply and evaluate scientific principles (i.e., biomechanical, psychological, and physiological) to learn and improve skills and participate successfully.	F4a, F4b
Demonstrate an understanding from which informed attitudes are developed about the potential benefits and hazards associated with various technologies.	F4a
Demonstrate creative approaches to problem-solving.	F2a
Develop individual responsibility for the democratic system.	E1a
INTEGRATING PREVIOUS EXPERIENCES AND KNOWLEDGE WITH NEW EXPERIENCE AND KNOWLEDGE:	F4
Develop the capacity to personalize and experience art.	F4b
Understand the role of art in history and in various cultures.	F4b
Manage change and diversity.	G1, G3b

New Mexico

	NCEO CODE
Use a variety of reading and listening strategies and understand when each is appropriate.	F1a, F3b
Take risks, knowing that making errors is part of learning.	F
Develop music skills through singing, moving, playing instruments, listening, creating, reading and writing music.	F4b
Develop aesthetic sensitivity through music.	F4b
Demonstrate knowledge of skill performance, rules, strategy, and terminology for at least three sports and activities.	C1b, F4
Demonstrate intermediate or advanced competence in at least one activity from three of the six categories: aquatics, dance, outdoor pursuits, individual activities/sports, and team sports.	F4
Demonstrate science information and skills as applied to real world problems and situations.	F4a
Understand historical connections among past, present and future.	F4a
IDENTIFYING, ACCESSING, EVALUATING, AND UTILIZING INFORMATION;	F4
Develop visual awareness and work with principles and elements of design.	F4b
Self-assess and self-correct.	G
Analyze tasks, adjust tasks.	F2a
Identify, organize, plan and allocate resources.	F4
Acquire knowledge of history and philosophy, of rules and terminology; assess strategy and tactics of the activity.	F4a
Develop skills in making nutritious choices when buying, preparing, and eating food.	C1a
Develop skills in emergency care and in the prevention of intentional and unintentional injuries.	C2a, C2c
Locate and use information for specific purposes and from a variety of sources.	F4
Read and listen for a variety of purposes, including the gathering of information, the extending of experience and the achievement of pleasure.	F1a, F3b
Become mathematical problem solvers. To develop these abilities, students need the experience of working with diverse problem-solving situations.	F2a, F3a
Recognize and respond to a variety of music.	F4b
Develop and understanding of and respect for various cultures through music.	F4b, G3b
Establish personal fitness goals using the results of fitness assessments to establish goals in a personal program of physical activity.	F2b, F3
Accept differences between personal characteristics and the idealized body images and elite performance levels portrayed in the media.	G3b
Feel empowered to maintain and improve physical fitness motor skills and knowledge about physical activity.	C2b, C3a
Develop a multicultural perspective that respects the dignity and worth of all people.	G2a, G2b
Interpret and use map and globe skills, graphs, charts, time-lines, and diagrams.	F4a
Understand the environment as a complex and fragile system, with limited resources, which is impacted by human decision and activity.	F4a
Demonstrate science process skills.	F4a
KNOWLEDGE AND UNDERSTANDING OF THE SOCIAL VALUE, DIGNITY, AND NECESSITY OF EARNING A LIVING;	D, E, F
Manage career decisions/goal setting.	A2f
Demonstrate work ethics.	E1a
Think creatively, make decisions and solve problems in work situations.	F2a
Value cooperation and responsible competition in learning, play and work.	G4b
Develop and practice appropriate ethics, self-control, self-discipline, commitment and self-esteem.	D, E
Acquire responsibility for one's self in all situations.	D, E, G2a
Understand vocational and avocational possibilities.	A2f
WORKING COOPERATIVELY AND ASSUMING RESPONSIBILITIES AS MEMBERS OF A TEAM;	G4b

New Mexico

	NCEO CODE
Respect individual expression and express one's self through art.	F4b, G3a
Participate in or lead a group process.	A2a, F4b
Teach others new skills.	E3b
Work without supervision.	D3e
Negotiate toward agreements.	G4c
Understand the roles of participant and spectator in an activity.	C1b, G
Practice respect for self, team, opponents, officials, sponsors, coaches, school staff and faculty.	D, E
Demonstrate cooperation, sportsmanship, and proper perspective under "competitive" conditions.	G4
Generate a pride in achievement, appreciation of self and team effort (cooperation) in achievement--hard work and fair play--and respect for the ability of others.	D, E, G3a, G3b
Use language to share experiences and gain insight into their own and others lives.	F1a
Demonstrate an appreciation for their own and other languages.	F1a, F4a
Demonstrate a respect for differences, such as cultural, linguistic, societal, and individual diversity.	G3b
Actively participate in making music alone and with others.	A2a, F4b
Exhibit socially desirable and acceptance behaviors in the areas of respect for others, assuming responsibility, leadership, and contributing to the group.	G3a, G4
Demonstrate appropriate and safe laboratory skills and practices.	C2a
Understand what is required of citizens in a democracy.	E2a, F4a
Develop social and political participation skills.	A2e, E1a, E3a, E3c, G4
MANAGING PERSONAL AND FINANCIAL RESOURCES APPROPRIATELY;	F
Work with a variety of technologies and systems to communicate.	F1a, F5a
Develop the ability to set short-range goals.	D3e
Integrate/evaluate the value of lifetime applications of an activity.	F2a
Become confident in their own ability. Students should view themselves as capable of using their growing mathematical power to make sense of new problem situations in the world around them.	G2b
Select and participate in appropriate physical activities by analyzing personal characteristics.	C1b, C3
Willingly participate in a progression of physical activities which contribute to the attainment of personal goals and the maintenance of wellness.	C3a
Understand relationships between society, its laws, and institutions.	F4a
Demonstrate economic literacy.	F4
UNDERSTANDING OF THE HISTORICAL EVOLUTION OF THE DEMOCRATIC PRINCIPLES OF THE CONSTITUTIONAL GOVERNMENT OF THE UNITED STATES;	E2, F4
Display responsibility, self-esteem, sociability, integrity and honesty.	D, E, G2a, G4
Apply concepts in consumer health, including the effects of consumer demands and advertising on health.	C1
Use other languages to understand and appreciate all aspects of a culture, including literature, philosophy, the arts, geography, social customs, history, government, and the sciences.	F4a
Develop an understanding of worldwide relationships of all sorts between and among nations.	F4a
APPLICATION OF THE PRINCIPLES AND PROCESSES OF OUR REPRESENTATIVE FORM OF GOVERNMENT AND UNDERSTANDING HOW THEY AFFECT INDIVIDUALS, COMMUNITIES, TRIBES, STATE, NATIONS, AND THE WORLD;	E2, F4
Act to promote a healthy school and community through school projects and partnerships with community agencies.	A2a, A2e, E1a, E3a, E3c
Act to create a healthy global environment.	E1a
Act to respect differences in mental and physical abilities of people due to various handicapping conditions.	G3b

New Mexico

	NCES CODE
Appreciate and respect one's own language, culture, and literature and the languages, cultures and literatures of others.	F4a, G3b
Demonstrate an understanding of the effects that language can have on behavior and behavior on language.	F4a
Understand the complex nature of culture.	F4a
Demonstrate geographic understanding using the five fundamental themes of geography (location, place, movement, human interaction with environment, and regions).	F4a
UNDERSTANDING OF THE DIFFERENCES AMONG VARIOUS FORMS OF GOVERNMENT;	F4a
Recognize the importance of multilingualism and multiculturalism in a global economy.	F4a
Develop and use research and study skills. SS	F4
Develop a knowledge base of United States and New Mexico history, geography, economy, politics and arts.	F4a
UNDERSTANDING AND APPLICATION OF THE BASIC ELEMENTS OF HEALTH MAINTENANCE;	C1, C2c
Know how to maintain one's own health, including concepts of personal hygiene, rules of safety, injury prevention, rehabilitative methods, and use of medical products.	C2a, C2c
Understand the physical, mental, emotional, and social aspects of human growth and development, including stages of development, human sexuality, child care and parenting, and aging.	F4
Understand health practices that contribute to lifelong wellness and prevention of conditions such as heart and lung diseases, diabetes, high blood pressure, and cancer.	C1
Understand how to protect oneself and others from infectious diseases, including HIV/AIDS.	C2e
Understand how to protect oneself and others from harmful effects of alcohol, tobacco, and other legal and illegal drugs.	C2d
Develop stress management, coping and refusal skills, and the ability to handle peer pressure.	F4, G1
Demonstrate, practice and enjoy exercises that promote lifelong fitness, including cardiovascular fitness, muscular endurance and strength, and flexibility.	C1b, C3
Learn and understand the concepts of safety, sportsmanship, nutrition and health to maintain an acceptable level of physical fitness essential for participation.	C1a, C1b, C2b, C3
Develop large and small motor skills needed for making music through body movements.	C3
Exhibit greater self confidence, self respect, self awareness, and self esteem.	G2a, G2b
Demonstrate and practice critical thinking, problems resolution and decision making skills.	F2a, G4c
STANDARDS FOR EXCELLENCE: STUDENT OUTCOMES, ATTITUDES AND ATTRIBUTES	
New Mexico students are successful, productive members of society as demonstrated by:	
a. A desire to learn and perform at their full potential;	F4
b. A positive self concept as evidenced by constructive expression of one's own physical, emotional, and mental uniqueness, and capabilities, strengths, talents, goals, and aspirations.	G2a
c. A respect for self and others, based on the recognition of individual similarities and differences, opinions, cultures, and concerns of others;	G3a, G3b
d. A respect for the authority, responsibilities, and privileges protected by the United States Constitution and Bill of Rights;	E1
e. An appreciation of the world's literature, art, music, and cultural attributes, particularly those that make our state and nation great and unique;	F4b
f. Personal and interpersonal skills necessary to function successfully as responsible members within families, workplace, communities, tribes, nations, and the world;	G1, G3, G4
g. A willingness to strive toward the attainment of positive personal and academic goals;	F
h. Assuming personal responsibility for shaping their own future;	F
i. Making decisions which promote good health; and	C1
j. A respect for life and the environment based on the recognition that all life is interdependent.	F

New York

Document Utilized

Learning Centered Curriculum and Assessment for New York State (1991)

Background

The *Learning Centered Curriculum and Assessment for New York State* specifies student skills, characteristics, and capabilities that are to be incorporated in curriculum frameworks. These curriculum frameworks (expected to be completed in 1995) will not be developed by grade level; instead they will specify standards that are developmentally appropriate for broad levels of student learning at the elementary, middle, and commencement or graduation levels. The frameworks will include: areas of study (kinds of knowledge to be acquired), core concepts (major ideas to be understood), key competencies (important skills to be developed), and performance indicators (illustrations of how students can demonstrate their knowledge, skills, and understanding). The board of regents has yet to decide whether the frameworks will be mandatory or voluntary.

New York

GOALS	NCES CODE
1. Each student will master communication and computation skills as a foundation to:	F1a, F3a
1.1 Think logically and creatively.	F2a
1.2 Apply reasoning skills to issues and problems.	F2a
1.3 Comprehend written, spoken, and visual presentations in various media.	F1a, F3b
1.4 Speak, listen to, read, and write clearly and effectively in English.	F1a, F3b, F3c
1.5 Perform basic mathematical calculations.	F3a
1.6 Speak, listen to, read, and write at least one language other than English.	F4a
1.7 Use current and developing technologies for academic and occupational pursuits.	F5a
1.8 Determine what information is needed for particular purposes and be able to use libraries and other resources to acquire, organize, and use that information for those purposes.	F4
2. Each student will be able to apply methods of inquiry and knowledge learned through the following disciplines and use the methods and knowledge in interdisciplinary applications:	F4
2.1 English language arts.	F4a
2.2 Science, mathematics, and technology.	F4a
2.3 History and social science.	F4a
2.4 Arts and humanities.	F4b
2.5 Language and literature in at least one language other than English.	F4
2.6 Technical and occupational studies.	F4
2.7 Physical education, health, and home economics.	F4
3. Each student will acquire knowledge, understanding, and appreciation of the artistic, cultural, and intellectual accomplishments of civilization, and develop the skills to express personal artistic talents. Areas include:	F4b
3.1 Ways to develop knowledge and appreciation of the arts.	F4b
3.2 Aesthetic judgements and the ability to apply them to works of art.	F4b
3.3 Ability to use cultural resources of museums, libraries, theaters, historic sites, and performing arts groups.	F4b
3.4 Ability to produce or perform works in at least one major art form.	F4b
3.5 Materials, media, and history of major arts forms.	F4b
3.6 Understanding of the diversity of cultural heritage's.	F4b

New York

		NCEO CODE
4.	Each student will acquire and be able to apply knowledge about political, economic and social institutions and procedures in this country and other countries. Included are:	F4a
4.1	Political, economic, and social processes and policies in the United States at national, State and local levels.	F4a
4.2	Political, economic, and social institutions and procedures in various nations; ability to compare the operation of such institutions; and understanding of the international interdependence of political, economic, social, cultural and environmental systems.	F4a
4.3	Roles and responsibilities the student will assume as an adult, including those of parent, home manager, family member, worker, learner, consumer and citizen.	F4a
4.4	Understanding of the institution of the "family," respect for its function, diversity, and variety of form, and the need to balance work and family in a bias-free democratic society.	F4a
5.	Each student will respect and practice basic civic values and acquire and use the skills, knowledge, understanding, and attitudes necessary to participate in democratic self-government. Included are:	E1a, F4a
5.1	Understanding and acceptance of the values of justice, honesty, self-discipline, due process, equality, and majority rule with respect for minority rights.	E, F4a
5.2	Respect for self, others, and property as integral to a self-governing, democratic society.	G2, G3a
5.3	Ability to apply reasoning skills and the process of democratic government to resolve societal problems and disputes.	F2a, F4a
6.	Each student will develop the ability to understand, appreciate, and cooperate with people of different race, sex, ability to understand, appreciate, and cooperate with people of different race, sex, ability, cultural heritage, national origin, religion, and political, economic, and social background, and to understand and appreciate their values, beliefs, and attitudes.	G3b, G4b
7.	Each student will acquire knowledge of the ecological consequences of choices in the use of the environment and natural resources.	F4a
8.	Each student will be prepared to enter upon post-secondary education and/or career-level employment at graduation from high school. Included are:	A2f
8.1	The interpersonal, organizational, and personal skills needed to work as a group member.	G, G4b
8.2	The ability to use the skills of decision making, problem solving, and resource management.	F2a
8.3	An understanding of ethical behavior and the importance of values.	D
8.4	The ability to acquire and use the knowledge and skill to manage and lead satisfying personal lives and contribute to the common good.	D, E, F, G
9.	Each student will develop knowledge, skills and attitudes which will enhance personal life management, promote positive parenting skills, and enable functioning effectively in a democratic society. Included are:	D, E, G
9.1	Self-esteem	G2a
9.2	Ability to maintain physical, mental, and emotional health.	C1, G
9.3	Understanding of the ill effects of alcohol, tobacco, and other drugs and of other practices dangerous to health.	C2d
9.4	Basic skills for living, decision making, problem solving, and managing personal resources to attain goals.	D, F2a
9.5	Understanding of the multiple roles adults assume, and the rights and responsibilities of those roles.	F4
9.6	Basic skills for parenting and child development.	F4
10.	Each student will develop a commitment to lifetime learning and constructive use of such learning, with the capacity for undertaking new studies, synthesizing new knowledge and experience with the known, refining the ability to judge, and applying skills needed to take ethical advantage of technological advances.	F

New York

ESSENTIAL SKILLS AND DISPOSITIONS	NCEO CODE
A person who is prepared to live well, to work productively, and to participate effectively in civic and political life in a democracy exhibits the following skills and dispositions. An effective curriculum develops these essential skills and dispositions in every student across all subject areas.	
A. Managing Resources	
Resources include time, fiscal and material means, and human qualities and endeavors which are needed to carry out activity.	F4
1. Identifies, organizes, plans, and allocates resources--time, fiscal, material, and human--to accomplish goals.	D3e, F4
2. Monitors, reflects upon, and assesses one's own progress and performance.	F2a, G2a, G2c
B. Managing Information	
Information management focuses on the ability to access and use information from various sources, such as other people, libraries, museums and other community resources.	F4
1. Acquires and evaluates information using a wide variety of sources and technologies.	F2a, F4
2. Manages, organizes, interprets and communicates information for different purposes.	F1, F2a, F4
3. Accesses and processes information acquired from data bases, computer networks and other emerging information systems.	F5a
4. Appreciates and gains understanding of new developments in information technology.	F5a
5. Selects and analyzes information and communicates the results to others using written, graphic, pictorial, or multimedia methods.	F1a, F3c, F4
C. Developing Personal Competence	
Personal competence includes values, self-management, and the ability to plan, organize, and take independent action.	D1a, D3
1. Exhibits integrity and honesty.	E1
2. Takes initiative and personal responsibility for events and actions.	D, D3e
3. Exhibits ethical behavior in home, school, workplace, and community.	E
4. Regards oneself with esteem and others with respect, with intelligent and humane regard for cultural differences and different abilities.	G2a, G3a, G3b
5. Balances personal, family, and work life.	no match
D. Developing Interpersonal and Citizenship Competencies	
1. Can analyze new group situations.	G4
2. Participates as a member of a team. Works cooperatively with others and contributes to the group with ideas, suggestions, and effort.	G4b
3. Teachers others. Helps others learn.	E3b
4. Exercises leadership. Communicates through feelings and ideas to justify a position; encourages, persuades, convinces, or otherwise motivates an individual or group.	F
5. Negotiates and works toward agreements that may involve exchanging resources or resolving divergent interests.	G4c
6. Understands, uses, and appreciates multiple perspectives. Works will with males and females and with people from a variety of ethnic, social, or educational backgrounds.	G3b, G4b
7. Joins as an informed participant in community, civic, and political life.	A2e, E1a
E. Working With Systems And Technology	
Systems skills include the understanding and ability to work with and within natural and constructed systems. Technology is the process and product of human skill and ingenuity in designing and making things out of available resources to satisfy personal and societal needs and wants.	F5a
1. Understands systems. Knows how social, organizational, biological, and technological systems work and operates effectively within them.	F5a
2. Monitors and corrects performance. Distinguishes trends, predicts impact of actions (inputs) on system operations, uses output to diagnose deviations in the functions (processes of a system, and takes the necessary action (feed-back) to correct performance.	F2a, F5a

New York

	NCEO CODE
3. Designs and improves systems. Makes suggestions to improve existing systems and develops new or alternative ones.	F5a
4. Selects technology. Judges which set of procedures, tools, apparatus, or machines, including computers and their programs, will produce the desired results.	F5a
5. Applies technology to tasks. Understands the overall intent and the proper procedures for using tools, setting up and using apparatus, and operating machines, including computers and their programming systems.	F5a
F. Developing Entrepreneurial Skills Entrepreneurial skills include both the cognitive abilities needed to make informed judgements, leading to creative and effective activity, and the disposition to meet challenges as varied as public speaking, musical performance, physical activity, and many more. Such skills include exploring the unknown and challenging conventions.	F2a
1. Makes considered and informed judgements.	F2a
2. Meets and accepts challenges.	D3e
3. Makes considered and informed assertions; makes commitments to personal visions.	D3e
4. Acts appropriately when the outcome is uncertain.	no match
5. Responsibly challenges conventions and existing procedures or policy.	G1
6. Uses self-evaluation to adjust and adapt.	F2a
7. Experiments creatively.	F
G. Thinking, Solving Problems, Creating The thinking and problem-solving category includes observing, experimenting, and drawing upon elements listed under the other essential skills categories. Creatively can be expressed through different types of intelligences such as logical/sequential, visual/spatial, musical, kinesthetic, and interpersonal.	F2a
THINKING	
1. Makes connections; understands complex relationships and interrelationships.	F2
2. Views concepts and situations from multiple perspectives in order to take account of all relevant evidence.	F2a
3. Synthesizes, generate, evaluates, and applies knowledge to diverse, new, and unfamiliar situations.	F2a
4. Applies reasoned action to practical life situations.	F2a
5. Imagine roles not yet experienced.	no match
SOLVING PROBLEMS	
6. Designs problem-solving strategies and seeks solutions.	F2a
7. Asks questions and frames problems productively, using methods such as defining, describing, gathering evidence, comparing and contrasting, drawing inferences, hypothesizing, and posing alternatives.	F1a, F2a
8. Re-evaluates existing conventions, customs, and procedures in solving problems.	F2a
9. Imagines, plans, implements, builds, performs, and creates, using intellectual, artistic, dexterous, and motor skills to envision and enact.	F2a
10. Chooses ideas, procedures, materials, tools, technologies, and strategies appropriate to the task at hand.	F2a
11. Adjusts, adapts, and improvises in response to the cues and restraints imposed by oneself, others, and the environment.	F2a
12. Makes decisions and evaluates their consequences.	F2a
CREATING	
13. Translates cognitive images and visions into varied and appropriate communication of ideas and information, using the methods of one or more disciplines--Imagining	F4b
14. Originates, innovates, invents, and recombines ideas, productions, performances, and/or objects--Creating.	F4b
15. Responds aesthetically--Appreciating.	F4b

North Carolina

Documents Utilized

Circle of Childhood (August, 1990)
Appendix C, Communication Skills Proficiencies: Grade Level Benchmarks (1993)
Overview: Mathematics K-8 (no date)
Competency Goals and Objectives, Information Skills (revised 1992)
Competency Goals and Objectives, Computer Skills (revised 1992)

Background

Since 1990, the state has had mandatory standards (called the "standard course of study") in computer skills, English/language arts, healthful living, information skills, mathematics, science, social studies and vocational education. The standards are grade-specific for grades K-12. Benchmarks in different skill areas have been developed as developmentally appropriate indicators of progress toward proficiency in these goals and objectives. The benchmarks are designed to enable teachers to assess student progress over time and in a variety of situations rather than to make promotion decisions. In 1989, the State Board of Education approved the piloting of a new curriculum, *Circle of Childhood*, that includes goals and objectives for children ages 3-5.

North Carolina

	NCEO CODE
MATHEMATICS PROFICIENCIES, EIGHTH GRADE	
Demonstrates understanding and uses of numbers in academic and real-world situations	F3a
Defines and uses number properties and elementary algebraic skills to solve problems	F2a, F3a
Analyzes data, and applies understanding of more complex mathematical concepts	F2a, F3a
Substitutes in formulas and solves for one unknown	F3a
Solves problems that involve geometric and measurement concepts	F2a, F3a
Integrates understanding of patterns and geometric concepts with visualization skills to solve problems and complete tasks	F2a, F3a
Applies mathematics reasoning in solving problems and making decisions	F2a, F3a
Uses organize approaches and variety of strategies to solve problems and make predictions	F2a, F3a
Represents problems and solutions verbally, numerically, graphically, geometrically, and symbolically	F1a, F3a
Employs statistical processes in gathering, organizing, displaying, and interpreting data	F3a
Demonstrates an understanding of the relevance and value that mathematics has for all citizens	F3a
COMPETENCY GOALS AND OBJECTIVES INFORMATION SKILLS	
GOAL 1: The learner will experience a wide variety of reading, listening, and viewing resources to interact with ideas in an information-intensive environment.	F1a, F3b
Objective 1.1: The learner will explore reading, listening, viewing sources and formats.	F1a, F3b
FOCUS:	
Participate in read-aloud, storytelling, and booktalking experiences	A2a, F1a, F3b
Identify characteristics of various genres	F4b
Acknowledge ownership of ideas in a variety of formats	F4b
Identify elements of composition	F4
Identify characteristics of various media formats	F4
Investigate potential sources of information outside the school	F4
Select and use sources and formats independently	D1, F4

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Objective 1.2: The learner will identify criteria for excellence in design, content, and presentation of information and formats.	F2a, F4
FOCUS:	
Identify standards of excellence for judging media resources	F2a, F4
Apply identified standards to a variety of resources	F2a, F4
Develop and support personal standards for selecting resources for information needs and enjoyment	F2a, F4
Objective 1.3: The learner will critique information sources and formats	F2a, F4
FOCUS:	
Analyze the merits of literary and design presentations	F2a, F4b
Assess reliability, relevance, and integrity of resources	F2a, F4
Recognize the power of the media to influence	F2a, F4
Determine usefulness of resources for instructional and personal needs	F2a, F4
Objective 1.4: The learner will relate ideas and information to life experiences	F4
FOCUS:	
Describe own cultural heritage and environment	F4a
Collect information about diverse cultures, environments, and peoples	F4a
Relate similarities and differences to personal life experiences	F4
Identify contributions of individuals and cultures	F4a
Recognize how the presentation of information and ideas is influenced by social, cultural, political, and historical events	F4a
Objective 1.5: The learner will communicate reading, listening, and viewing experiences	F1a, F3b
FOCUS:	
Apply communications processes effectively	F1a
Produce media in various formats based on reading, listening, viewing experiences	F1a, F3b, F4
Credit sources used in communicating reading, listening, viewing experiences	F1a, F4
GOAL 2: The learner will identify and apply strategies to access, evaluate, use, and communicate information for learning, decision-making, and problem-solving	F1a, F2a
Objective 2.1: The learner will explore research processes that meet information needs.	F4
FOCUS:	
Acknowledge that there are a variety of reasons for seeking information--curricular pursuits, personal interests, problem-solving and decision making	F4
Explore print, electronic, human, and community reference sources	F4
Recognize that a systematic approach is more productive than a random approach	F4
Describe several research process models	F4
Objective 2.2: The learner will engage in research process to meet information needs.	F4
FOCUS:	
Develop a search strategy:	
define and analyze the task	F4
determine format of the end product	F4
identify known and unknown information	F4
establish personal goals for the task	F4
select the most appropriate model for the task	F4
prepare a plan	F4
Access Information:	F4
identify resources	F4
gather information	F4
credit sources	F4
Critique Information:	F2a, F4
verify reliability of the sources	F2a, F4
analyze and synthesize information	F2a, F4
determine further needs, if any	F2a, F4
revise/restructure the search	F2a, F4
outline information to be used	F2a, F4

North Carolina

	NCEO CODE
Use Information:	F4
follow a prescribed procedure of developing products	F4
create, produce and/or present a final product	F4
credit sources of information	F4
Evaluate the Process and the Product:	F2a, F4
assess the extent to which the process was appropriate	F2a, F4
appraise the technical quality of the product	F2a, F4
determine how well the product communicated information to the audience	F2a, F4
COMPETENCY GOALS AND OBJECTIVES: COMPUTER SKILLS, GRADE LEVEL: EIGHT	
GOAL 1: The learner will understand important issues of a technology-based society and will exhibit ethical behavior in the use of computer technology.	E, F4a, F5a
1.1 Identify technological skills required for various careers.	A2f, F4a
1.2 Distinguish between different types of data as to which are public and which are private.	F4a
1.3 State the need for protection of software and hardware from computer viruses.	F4a, F5a
GOAL 2: The learner will demonstrate knowledge and skills in using computer technology.	F5a
2.1 Revise word processed text to be a simple desktop published document.	F5a
GOAL 3: The learner will use a variety of computer technologies to access, analyze, interpret, synthesize, apply and communicate information.	F5a
3.1 Given a prepared database, use sorting and searching techniques to solve a specific problem.	F2a, F5a
3.2 Enter and edit data into a prepared spreadsheet to test "What if?" statements.	F5a
COMMUNICATION SKILLS PROFICIENCIES: GRADE LEVEL BENCHMARKS	
READING, GRADE EIGHT	
CHARACTERISTICS OF THE READER: EXHIBITS THE ATTITUDES, HABITS, AND DISPOSITIONS OF A READER.	F3b
Recognizes that reading can change attitudes and behaviors.	F3b
Expresses emotional reactions and personal opinions and relates personal values to a selection or experience.	F3b
Acknowledges that there are many reasons for seeking information such as curricular pursuits, personal interests, or consumer needs.	F2a
Compares and offers critical analysis of materials presented in the media.	F2a
READING STRATEGIES: USES ONE OR MORE OF THE FOLLOWING STRATEGIES AS APPROPRIATE TO CONSTRUCT MEANING FROM TEXT.	
Uses knowledge of word formation, sentence structure, or other context clues.	F3b
Maps out the plots and character developments in novels and other literary texts.	F3b
Supports argument or opinion by reference to evidence presented in sources outside the text.	F3b
Assesses owns performance relative to material and purpose.	F3b
Manages identified resources need to complete reading tasks.	F3b
Formulates questions about a subject based on prior knowledge.	F3b
Uses print and electronic catalogs and indices to locate materials.	F3b
READING COMPREHENSION: CONSTRUCTS MEANING FROM LITERARY, INFORMATIONAL, AND PRACTICAL TEXTS.	
Reads literary material with complex characters, settings, and episodes independently.	F3b
Reads informational and practical materials with complex vocabulary, concepts, and formats independently.	F3b

North Carolina

	NCEO CODE
Recognizes the characteristics of argumentative (persuasive) text.	F3b
Recognizes coherence, logic, and organization in argumentative (persuasive) text.	F3b
Recognizes relatedness and sufficiency of details in argumentative (persuasive) text.	F3b
Extracts ideas embedded in complex passages of text.	F3b
Synthesizes the author's bias.	F3b
Evaluates appropriateness of persuasive techniques such as personality, tradition, rhetoric, and reason.	F3b
Analyzes and formulates a critical opinion about literary and informational material.	F2a, F3b
Recognizes how sound, diction, symbolism, and figurative language interact to communicate multiple interpretations.	F1, F3b
Discusses ways language and visuals bring characters and events to life.	F1a, F3b
WRITING, GRADE EIGHT	
CHARACTERISTICS OF THE WRITER: POSSESSES THE ATTITUDES, HABITS, AND DISPOSITIONS OF A WRITER.	
Appreciates writing as a major source for learning through note taking, brainstorming, listing, or writing journals or learning logs.	F3c
Works collaboratively on a written product that expresses a response to a selection or experience.	F3c, G4b
Writes with ease in both short passages and extended writing.	F3c
COMPOSING PROCESS: USES ONE OR MORE OF THE FOLLOWING STRATEGIES TO WRITE LITERARY, INFORMATIONAL, AND PRACTICAL TEXTS.	
Understands and uses stages in the writing process independently.	F3c
Writes on a variety of topics and in more than one genre and mode.	F3c
Assesses own performance relative to audience and purpose.	F3c
Manages identified resources needed to complete writing tasks.	F3c
Revises vocabulary, organization, and tone as appropriate for audience and purpose.	F3c
Chooses organization and layout appropriate for audience.	F3c
Uses literary devises and design elements as appropriate to describe, support an opinion, or persuade an audience.	F3c
Selects vocabulary as appropriate to reduce ambiguities and to indicate shades of meaning.	F3c
Uses grammatical terms necessary for conferencing when revising and editing.	F3c
*Edits work for errors in sentence formation, usage, mechanics, and spelling. (*See editing proficiencies for Grade 8).	F3c
COMPOSING PRODUCTS: WRITES LITERARY, INFORMATIONAL, AND PRACTICAL TEXTS TO CONVEY MEANING, TO LEARN, AND TO CLARIFY THINKING.	
Writes arguments that have coherent, logical, and organized structure.	F2a, F3c
Writes arguments that provide sufficient, related, elaborated reasons to persuade an audience to adopt a position.	F3c
Writes practical texts such as letters of request and complaint, application forms, or written directions.	F3c
Offers critical opinions or analysis of reading and expresses an alternate point of view of author by writing in learning log.	F2a, F3c

Ohio

Documents Utilized

Prekindergarten Through Grade 12 Standards for Ohio Schools (March, 1994)

Background

In 1989, the legislature required the state board of education to establish a model competency-based education program for grades 1-12 in math, reading, and writing. Science and social studies were added later. The law permitted the state board to develop standards for other subjects. Ohio has developed curriculum frameworks for mathematics, reading, science, social studies, and writing. Standards in comprehensive health and physical education, fine arts, and second languages are under development. These frameworks are voluntary for school districts, but are tied to a new statewide testing system.

Ohio

LEARNING OUTCOMES FOR NINTH GRADE	NCEO CODE
READING	
Given a fictional selection, the student will demonstrate an integrated understanding of the language, elements of plot , possible themes, likely motives and traits of characters, and the effect of setting, by responding to items regarding:	F3b, F4b
the meaning of an unfamiliar word (i.e., uncommon or low-frequency word)	F3b
the meaning of a multiple-meaning word.	F3b
details (e.g., who, what, where, how, or problem/solution)	F3b
sequence of time, places, events, and ideas.	F3b
stated or implied main ideas.	F3b
most-probable outcomes.	F3b
cause-and-effect relationships.	F3b
the difference between statements based on fact and statements based on inference.	F3b
predictions about whether certain information is likely to be included in material.	F3b
the identification of questions that will demonstrate comprehension of the main ideas and supporting details.	F3b
Given a nonfictional selection, the student will demonstrate an integrated understanding of the major concepts, the evidence that supports those concepts, the possible application for the concepts, and the possible purposes the selection might serve, by responding to items regarding:	F3b
details (e.g., who, what, when, where, how, or problem/solution)	F3b
stated or implied main ideas.	F3b
cause-and-effect relationships.	F3b
the difference between statements based on fact and statements based on inference.	F3b
whether a statement is a fact or an opinion.	F3b
predictions about whether certain information is likely to be included in material.	F3b
details that either support or do not support the main idea.	F3b
the author's purpose for writing the selection.	F3b
the best summary for a specific audience.	F3b
the authors attitude toward a topic.	F3b
Given everyday/functional reading materials, the student will identify, locate, and use information in items regarding:	F3b
directions of two or more steps.	F3b
the selection and use of appropriate reference sources and illustrative materials.	F3b
Examples of reference sources/illustrative materials would be dictionary, encyclopedia, almanac, atlas, telephone book, card catalog, periodical/newspaper, schedule, table of	F3b

Ohio

	NCEO CODE
contents, and index.	
Examples of skills/processes would be using alphabetical order; skimming and scanning, reading charts, tables, diagrams, graphs, maps, labels, and signs.	F3b
the meaning of vocabulary words used on an application form.	F3b
the use of propaganda.	F3b
WRITING	
The student will produce a piece of writing that:	
conveys a message related to the prompt (topic or description of a situation)	F3c
includes supporting ideas or examples.	F3c
follows a logical order.	F3c
conveys a sense of completeness.	F3c
exhibits word choice appropriate to the audience, the purpose , and the subject.	F3c
includes clear language.	F3c
contains complete sentences and may contain purposeful fragments.	F3c
exhibits subject-verb agreement.	F3c
contains standard forms of verbs and nouns.	F3c
exhibits appropriate punctuation.	F3c
exhibits appropriate capitalization.	F3c
contains correct spelling.	F3c
is legible.	F3c
MATHEMATICS	
The student will:	
compute with whole numbers, fractions, an decimals.	F3a
compare, order, and determine equivalence of fractions, decimals, percents, whole numbers, and integers.	F3a
solve and use proportions.	F2a, F3a
round numbers to the nearest thousand, hundred, ten, one, tenth, and hundredth.	F3a
solve problems and make applications involving percentages.	F3a
select and compute with appropriate standard or metric units to measure length, area, volume, angles, weight, capacity, time, temperature, and money.	F3a
convert, compare, and compute with common units of measure within the same measurement system.	F3a
read the scale on a measurement device to the nearest mark and make interpolations where appropriate.	F3a
read the scale on measurement device to the nearest mark and make interpolations where appropriate.	F3a
recognize, classify, and use characteristics of lines and simple two-dimensional figures.	F3a
find perimeters (circumference) and areas of polygons (circles)	F3a
find surface areas and volumes of rectangular solids.	F3a
read, interpret, and use tables, charts, maps, and graphs to identify patterns, note trends, and draw conclusion.	F3a
use elementary notions of probability.	F3a
computer averages.	F3a
solve simple number sentences and use formulas.	F2a, F3a
evaluate algebraic expressions (simple substitutions)	F3a
CITIZENSHIP	
The student will:	
identify the major significance of the following historic documents: Northwest Ordinance, Declaration of Independence, Constitution, Bill of Rights.	F4a

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Ohio

	NCEO CODE
know that many different peoples with diverse backgrounds (cultural, racial, ethnic, linguistic) make up our nation today.	F4a
identify various symbols of the United States: flag, national anthem, Pledge of Allegiance, Independence Day.	F4a
locate the United States, the nation's capital, the state of Ohio, and Ohio's capital on appropriate maps of the nation, hemisphere, or world.	F4a
demonstrate map-reading skills, including finding directions, judging distances, and reading the legend.	F4a
know the following economic concepts:	F4a
All levels of the U.S. government assess taxes in order to provide services.	F4a
Individuals and societies make choices to satisfy wants with limited resources.	F4a
Nations become interdependent through trade.	F4a
identify the main functions of each branch of government (executive, legislative, judicial) at the national, state, and local levels.	F4a
identify major economic systems: capitalism, socialism, communism.	F4a
demonstrate an understanding of the concept of federalism by identifying the level of government (local, state, national) responsible for addressing the concerns of citizens.	F4a
distinguish the characteristics, both positive and negative, of various types of government: representative democracy, monarchy, dictatorship.	F4a
describe the process for making, amending, or removing laws.	F4a
know how law protects individual in the United States.	F4a
Give examples of the rights and freedoms guaranteed in the Bill of Rights.	F4a
Apply the concept of justice, including due process and equity before the law.	F4a
Know the importance of learning or work environment free of discrimination against individual differences.	F4a
Identify legal means of dissent and protest against violation of rights.	F4a
understand the major role of political parties in a democracy is to provide a choice in governmental leadership (i.e., candidates and platforms)	F4a
understand the role of public officials in government.	F4a
Distinguish between elected and appointed officials.	F4a
Describe the ways officials can be elected or appointed.	F4a
Evaluate the actions of public officials on the basis of a given set of criteria.	F4a
know that voting is both a privilege and a responsibility of U.S. citizenship.	F4a
Recognize that property ownership, race, gender, literacy , and certain tax payments no longer affect eligibility to vote.	F4a
Identify the qualifications for voting.	F4a
demonstrate the ability to use information that enables citizens to make informed choices.	F4a
Use more than one source to obtain information.	F4a
Identify points of agreement and disagreement among sources.	F4a
Evaluate the reliability of available information.	F4a
Draw conclusions by reading and interpreting data presented in charts and graphs.	F4a
Identify and weigh alternative viewpoints.	F4a
identify opportunities for involvement in civic activities.	E3c

Oklahoma

Document Utilized

Priority Academic Student Skills--P.A.S.S. (September, 1993)

Background

The Education Reform and Funding Act, passed in April 1990, called for the development of a core curriculum in six core areas: the arts, language arts, languages, mathematics, science, and social studies. There are also content standards in four other areas: instructional technology; technical education; health, safety, and physical education; and hands-on career exploration and information skills. In the fall of 1993, the state did an extensive revision of the standards in all areas. Each subject is organized differently, but all include standards for grades K-12. Schools are required to include the state's core curriculum in their local curriculum, but districts can choose how to implement the standards. Criterion-referenced tests are under development to assess mastery of the standards in grades 5, 8, and 11.

Oklahoma

PRIORITY ACADEMIC STUDENT SKILLS	NCEO CODE
LANGUAGE ARTS READING: GRADES 6-8	
1. The student will exhibit positive reading habits and view reading as important. The Student Will:	F3b
a. Choose to read independently sustained periods of time.	F3b
b. Read for a variety of purposes such as for entertainment and for information.	F3b
c. Demonstrate use of functional print including, but not limited to , schedules, letters, catalogs, directories, charts, maps, graphs and directions.	F3b
d. Demonstrate appropriate use of informational sources including, but not limited to, trade books, almanacs, atlases, encyclopedias, dictionaries, thesauruses, magazines and newspapers.	F3b
2. The student will read with fluency in order to understand what is read. The Student Will:	F3b
a. Identify technical and specialized terms and determine meanings of multiple meaning words using a variety of strategies (prediction, context, structural analysis and phonics).	F3b
b. Identify narrative and expository text.	F3b
c. Use story structure to organize, recall and make inferences about the story (setting, characters, goal, plot, conflict and resolution).	F3b, F4b
d. Determine a statement of the key concept(s), actual or implied, or theme.	F3b
e. Identify details that support or describe a key concept.	F3b
f. Evaluate and respond to reading materials through the arts, discussion, writing and/or further reading.	F2a, F3b
g. Make inferences and draw conclusions from the evidence presented in the reading material.	F2a, F3b
h. Recognize and interpret relationships in text such as comparison/contrast, cause/effect, problem/solution and sequential order.	F2a, F3b
j. Interpret meaning from the author's use of figurative language.	F3b
k. Use background knowledge and questioning to evaluate issues and propaganda within reading material.	F2a, F3b
4. The student will know the goal for reading is constructing meaning and will use effective strategies to aid comprehension. The Student Will:	F3b
a. Expect the reading material to make sense and use correction strategies when the meaning is not clear.	F3b
b. Make predictions and verify or revise thinking while reading.	F3b

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	NCEO CODE
c. Generate questions to clarify meaning.	F3b
d. Adjust reading rate according to the purpose for reading.	F3b
e. Use appropriate strategies for studying and learning from the text such as outlining, webbing/clustering, skimming and summarizing.	F3b
f. Summarize text by identifying and organizing relevant material.	F3b
g. Relate dictionary definitions to the context of the reading in order to aid understanding.	F3b
h. Determine strategies appropriate to text and context.	F3b
LANGUAGE ARTS: GRADES 6-8	
PROGRAM SKILLS	
1. Use thinking skills to acquire and process written and auditory information for a variety of purposes	F1a, F2a, F3b
2. Effectively express ideas in oral and written modes for a variety of purposes and audiences.	F1a, F3c
3. Recognize major literary and cultural traditions and use them as a foundation for effective communication. The Student Will:	F1, F4b
a. Listen for a variety of purposes (e.g., enjoying, recalling, interpreting, applying, evaluating directions or concepts).	F1a
b. Expand strategies to comprehend oral and written materials (e.g., "strategic reading," class discussion, note-taking, clustering or outlining information).	F1a, F3b
c. Understand fact, opinion and fantasy in print and nonprint media (e.g., literature, electronic media, advertising, propaganda).	F3b, F4b
d. Use techniques of writing to learn (e.g., note-taking, outlining, cubing, interviewing, journals, learning logs).	F3c
e. Communicate through a variety of written forms, on paper and on a computer screen (e.g., paragraphs, compositions, poetry, stories, friendly and business letters).	F3c, F5a
f. Demonstrate thinking skills in listening, speaking, reading and writing (e.g., focusing, gathering, organizing, analyzing, synthesizing, generating, evaluating print and nonprint information).	F1a, F2a, F3b, F3c
g. Express ideas and opinions orally and in writing (e.g., writing or performing plays, dialogues, reports).	F1a, F3c
h. Expand vocabulary through word study, literature and class discussion (e.g., word origins, roots and affixes, meaning in context, levels of usage).	F4a
i. Utilize the writing process to develop and refine composition skills (e.g., prewriting, drafting, revising, editing or proofreading, publishing or sharing).	F3c
j. Demonstrate use of appropriate conventions in written composition (e.g., edit for usage, mechanics, and spelling.	F3c
k. Compose a variety of types of paragraphs, each containing a topic sentence, supporting sentences and a concluding sentence (e.g., narrative, descriptive, expository, persuasive).	F3c
l. Communicate for a variety of audiences and purposes (e.g., to inform, to entertain, to persuade, to express ideas).	F3c
m. comprehend and use figurative language and sound devices in speaking and writing (e.g., metaphor, simile, personification, rhythm, rhyme, alliteration, onomatopoeia).	G1a, F3c
n. Demonstrate a knowledge of literary elements and how they affect the development of literary work (e.g., plot, character, setting, theme, conflict, symbolism, point of view).	F4b
o. Demonstrate a knowledge of and appreciation for various forms (genres) of literature (e.g., short story, novel, drama, narrative and lyric poetry, essay, biography).	F4b
p. Demonstrate awareness of literature from other cultures (e.g., fables, legends, myths, nonfiction articles).	F4b
MATHEMATICS: GRADES 6-8	
PROCESS SKILLS	
1. Mathematics as Problem-Solving. The Student Will:	

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a. Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.	F2a, F3a
b. Use technology to generate and analyze data to solve problems.	F2a, F3a, F5a
c. Formulate problems form situations within and outside of mathematics and generalize solutions and strategies to new problem situations.	F2a, F3a
d. Evaluate results to determine their reasonableness.	F2a, F3a
e. Apply a variety of strategies (e.g., trial and error, diagrams, making the problem simpler) to solve problems, with emphasis on multistep and nonroutine problems.	F2a, F3a
f. Use oral, written, concrete, pictorial, graphical and/or algebraic methods to model mathematical situations.	F1a, F3a, F3c
2. Mathematics as Communication. The Student Will:	
a. Translate a mathematical idea from one form to another (e.g., oral, written, pictorial, concrete, graphical, algebraic).	F3a
b. Use listening, reading and visual skills to discuss, interpret and evaluate mathematical ideas.	F1a, F2a, F3a, F3c
c. Reflect on and justify his/her reasoning in mathematical problem-solving (e.g., convince, demonstrate, formulate).	F2a, F3a
d. Select and use appropriate terminology when discussing mathematical concepts and ideas.	F3a
3. Mathematics as Reasoning. The Student Will:	
a. Identify and extend patterns and use experiences and observations to make suppositions.	F3a
b. Use counterexamples to disprove suppositions (e.g., 2 to the 4th is equal to 4 squared but 3 squared is not equal to 2 cubed.)	F3a
c. Use given facts, models and logical arguments to validate a supposition.	F3a
4. Mathematics as Connections. The Student Will:	
a. Apply mathematical strategies to solve problems that arise from other disciplines.	F2a, F3a
b. Demonstrate the ability to relate one area of mathematics to another.	F3a
5. Number Sense and Number Theory: The Student Will:	
a. Estimate and then solve applications.	F2a, F3a
b. Use ratio and proportions to solve a variety of problems.	F2a, F3a
7. Patterns and Functions: The Student Will:	
a. Discover, describe, extend , analyze and create a wide variety of patterns using tables, graphs, rules and models.	F2a, F3a
b. Discover special characteristics of relationships (e.g., relationships among area, perimeter and volume; relationships between operations on integers and operations on whole numbers; relationships between negative exponents and place value) using concrete materials and technology.	F3a, F5a
8. Algebraic Concepts: The Student Will:	
a. Solve linear equations using concrete, informal and formal methods.	F2a, F3a
b. Graph linear functions on a coordinate plane.	F3a
c. Solve a simple inequality and graph the solution on a number line.	F2a, F3a
9. Statistics: The Student Will:	
a. Distinguish between the basic use and misuse of statistical representations and inferences.	F3a
b. Select and apply appropriate formats in the presentation of collected data.	F3a
c. Calculate and determine the most appropriate statistic among the mean, median, mode and range.	F3a
10. Probability: The Student Will:	
a. Predict possible outcomes through experiments or simulations.	F3a
b. Use permutations and combinations in applications of probability.	F3a
11. Geometry The student will incorporate congruence, similarity and transformation into problem solving skills.	F2a, F3a
12. Measurement: The Student Will:	
a. Integrate measurement into other areas of mathematics.	F3a
b. Use the concept of rate (e.g., distance in relation to time, pay in relation to hours worked).	F3a

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SCIENCE: GRADES 6-8	
The Priority Academic Student Skills should be presented throughout grade eight are to be learned with Earth/Space, Life and Physical Science applications.	
1. Observing and Measuring: Observing is the first action taken by the learner to acquire new information about an object or event. Opportunities for observations are developed through the use of a variety of scientific tools. Measurement allows observations to be quantified. The Student Will:	
a. Identify similar or different characteristics in a given set of objects, organisms or events.	F4a
b. Select descriptive (qualitative) or numerical (quantitative) observations in a given set of objects, organisms or events.	F4a
c. Identify qualitative and quantitative changes given conditions before, during and after an event.	F4a
d. Select the appropriate unit to measure objects, organisms or events. (When applicable, use System International units).	F4a
2. Classifying: Classifying establishes order. Objects, organisms and events are classified based on similarities, differences and interrelationships. The Student Will:	
a. Identify properties by which a set of objects, organisms or events could be ordered.	F4a
b. Select a sequential order for each property within a set of objects, organisms or events.	F4a
c. Identify the properties on which a given classification system is based.	F4a
d. Use observable properties to classify a set of objects, organisms or events.	F4a
e. Place an object, organism or event into a classification system.	F4a
3. Experimenting: Experimenting is the sequential method of discovering information. It requires making observations and measurements to test ideas against facts. The Student Will:	
a. Arrange the steps of a scientific problems in the proper sequential order.	F4a
b. Identify a simple variable and/or control in an experimental set-up.	F4a
c. Identify a hypothesis for a given problem.	F4a
4. Interpreting: Interpreting is the process of making predictions and hypotheses using data collected in an investigation. With these skills students will develop conclusions. The Student Will:	
a. collect and report data in an appropriate method when given experimental procedure or information.	F4a
b. Predict data points not included on a given graph.	F4a
c. Interpret line, bar and circle graphs.	F4a
d. Select the most logical conclusion for given experimental data.	F4a
e. Accept or reject hypotheses when given results of an investigation.	F4a
5. Communicating: Communicating is the process of describing, recording and reporting experimental procedures and results to others. Communications may be oral or written and includes organizing ideas, using appropriate vocabulary, graphs, other visual representations and mathematical equations. The Student Will:	
a. Describe the properties of an object or event in sufficient detail so another person can identify it.	F1, F4a
b. Complete or create and appropriate graph or chart from collected data.	F1, F4a
6. Safety in the Science Classroom: Safety is an essential part of any science activity. Safety in the classroom and care of the environment are individual and group responsibilities. The Student Will:	
a. Recognize potential hazards within a given activity.	C2a
b. Practice safety procedures in all science activities.	C2a
SOCIAL STUDIES: GRADES 6-8	
CIVICS	
The Student Will:	
1. Evaluate the impact that individuals have upon their surroundings and analyze the influences of economic principles on the system of government of the United States.	F4a

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2. Identify and explain the basic rights and responsibilities of citizenship.	F4a
a. Identify individual rights found in the Constitution including its amendments.	F4a
b. Identify the need for law and government and explain the beliefs on which democratic government is based.	F4a
3. Describe the characteristics of local, state and national governments and how they compare to other governments.	F4a
a. Identify the interrelationship of federal, state, county and municipal governments.	F4a
b. Evaluate the impact of government on the lives of Oklahomans and how Oklahomans can effect change in governments.	F4a
c. Define the concept of separation of powers and describe its effect upon our three branches of government.	F4a
4. Evaluate how the political process works and describe the election process involved in national, state and local governments including the role of political parities in the United States.	F4a
5. Describe the ethnic and cultural diversity of the population of the United States and analyze the ways that different ethnic and cultural groups are protected under the Constitution.	F4a
6. Use the skills of critical thinking necessary for analysis of governmental concepts.	F2a, F4a
a. Make a distinction among propaganda, fact and opinion; identify cause and effect relationships; and draw conclusions.	F2a, F4a
b. Interpret and analyze political cartoons, graphs and charts.	F4a
ECONOMICS	
The Student Will:	
1. Explain economic beliefs that served as a foundation for the development of the economic system of the United States and explain the role of the government in the economy.	F4a
2. Describe wise economic choices using economic situations involved in everyday life and describe a citizen's role in society as both producer and a consumer.	F4a
3. Describe major features of the modified market economy.	F4a
a. Describe how the forces of supply and demand interact to determine the prices of goods and services.	F4a
b. Explain how money is used as a medium of exchange.	F4a
UNITED STATES HISTORY	
The Student Will:	
1. Identify the political growth, major events and personalities affecting the development of the United States.	F4a
a. Identify and analyze major events, causes, effects and the role of significant personalities of the Revolutionary War.	F4a
b. Trace the growth of sectional conflict between 1820 and the Civil War: Missouri Compromise, the Compromise of 1850, the Kansas-Nebraska Act and the Dred Scott Decision.	F4a
c. Analyze the significance of the Civil War and Reconstruction.	F4a
2. Analyze the creation an judicial interpretations of the historical documents on which our governments is founded and examine documents which contributed to the establishment and growth of the United States government.	F4a
3. Identify and describe events, trends and movements which shaped social and cultural development in the United States.	F4a
a. Identify major ethnic groups in the United States (including African Americans, Asian Americans, European Americans, Hispanic Americans, Native Americans) and trace their political, economic and cultural contributions throughout the history of the United States.	F4a
b. Describe the role of women in the development of the United States.	F4a
4. Analyze evens and identify personalities that influenced the development of United States foreign policy and explain how Manifest Destiny determined the territorial expansion of the United States in the Louisiana Purchase, the Texas Annexation, the Mexican Cession and Oregon Territory.	F4a

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5. Identify and describe the characteristics and major factors contributing to the growth of the American economy.	F4a
a. Recognize the economic conflict between the industrial North and the agrarian South which led to the Civil War.	F4a
b. Describe the growth of the West and analyze its effect on the American way of life.	F4a
c. Explain the impact of the Industrial Revolution on the United States.	F4a
WORLD GEOGRAPHY	
The Student Will:	
1. Identify and describe the physical patterns and processes of the biosphere, the layer of the earth in which life exists.	F4a
a. Identify forces beneath the crust that shape the earth, explaining the processes and agents that shape the physical features on the earth.	F4a
b. Identify various biomes (the community of plants and animals that live in a particular climate) of the world.	F4a
c. Determine the major weather phenomena of the world and the effect of latitude, elevation, prevailing wind and proximity to bodies of water on climate.	F4a
2. Assess the impact of humans on the biosphere.	F4a
a. Relate human population growth to world atmospheric changes.	F4a
b. Give and example of the effects of industrialization and transportation on the environment.	F4a
3. Locate and describe world culture patterns.	F4a
a. Describe common characteristics of the major regions of the world: United States and Canada, Latin America, Europe and the former Soviet Union, North Africa and the Middle East, Sub-Saharan Africa, South Asia, East Asia, Southeast Asia and Oceania.	F4a
b. Analyze demographic and cultural characteristics of the major regions.	F4a
c. Compare and contrast the ways of living in developed and developing countries relative to economic, political and technological systems.	F4a
4. Analyze contemporary world issues.	F4a
a. Identify the major natural resources that support industrial societies and describe their world distribution, international trade patterns and future availability.	F4a
b. Compare and contrast population growth rates of industrialized and non-industrialized countries.	F4a
c. Recognize ethnic diversity within political units and major cultural regions.	F4a
5. Identify and use maps, graphs and statistical sources.	F4a
a. Identify and draw conclusions from different kinds of maps, charts, graphs or pictorial materials based on geographical data.	F4a
b. Identify and locate the fifty states of the United States, capitals, major cities and countries of the world.	F4a
c. Identify basic landforms and water bodies, given definitions or pictorial representations.	F4a
6. Read and interpret geographic information, using a variety of sources, and communicate that information in both written and oral form.	F4a
a. Collect data about geographic issues form a variety of sources, formulate conclusions and present finding.	F4a
b. Evaluate different solutions to geographic problems.	F4a
WORLD HISTORY	
The Student Will:	
1. Evaluate the impact of geography on civilizations of the world and describe the effect of geography on economic and political systems an don the movements of people and ideas.	F4a
2. Analyze the major conflicts, events and contributions of individuals and describe the impact of major historical evens and figures on past and present societies.	F4a
3. Identify and describe the world's major economic and political systems and the impact of major technological revolutions and identify the impact of significant scientific and technological changes on society.	F4a
4. Identify and describe events, trends and movements which have shaped the social and cultural	F4a

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developments of the major nations of the world and identify major contributions of world civilizations in art, music, architecture and literature.	
5. Trace the development and influence of various religious, moral and philosophical ideologies and identify major world religions and how they influenced the development and growth of nations.	F4a
VISUAL ART: GRADES 6-8	
The Student Will:	
a. Express individual ideas while making original art, using a variety of art materials (media)	F4b
b. Develop skills and techniques in suing a wide variety of art media, tools and processes.	F4b
c. Recognize and utilize a variety of sources of ideas and content for his/her own art work, e.g., observation, memory, imagination.	F4b
d. Depict the three-dimensional qualities indicated by overlapping planes, vertical position, size, and color intensity.	F4b
e. Analyze and begin to evaluate the principles of design: rhythm, balance, contrast, movement, variety, center of interest, and repetition in his/her own work and the of others.	F2a, F4b
f. Analyze and begin to evaluate the relationship of the elements of design: line, color, form, shape, texture and space in his/her own work and the works of others.	F2a, F4b
g. Compare works which are similar in expressive quality, composition and style.	F4b
h. Demonstrate knowledge of and express opinions about works of art of different forms, media and styles and begin to justify choices.	F4b
i. Explain the purposes of art and its relationship to society.	F4b
j. Recognize and describe the cultural and ethnic traditions which have influenced the visual arts.	F4b
k. Compare and contrast the development of art throughout history.	F4b
l. Explain the role of art and artists in society and in the local community.	F4b
m. Identify the variety of art forms used in business and industry, including possible vocations and professions that may be associated with such art forms.	F4b
n. Analyze the relationship that exists between visual art and other art forms such as music, dance and drama.	F4b
o. Evaluate and adjust his/her own art work in progress based on an understanding of the elements and principles of design.	F4b
p. Recognize and compare two- and three- dimensional forms that are natural and man-made.	F4b
q. Analyze and demonstrate uses of the visual arts in today's world including the popular media of advertising, television and film.	F2a, F4b
GENERAL MUSIC: GRADES 6-8	
The Student Will:	
a. Participate in music through singing and/or playing instruments.	A2a, F4b
b. Sing with an acceptable tone quality throughout his/her singing ranges or play an instrument with an acceptable tone quality throughout an appropriate range.	F4b
c. Sing or play a varied repertoire (selections) of folk, ethnic, classical and contemporary musical pieces.	F4b
d. Perform musical pieces in at least two parts.	F4b
e. Play a variety of rhythmic or melodic instruments.	F4b
f. Employ pitch syllables, numbers or letter names to perform melodic passages.	F4b
g. Employ rhythm syllables to perform rhythmic passages.	F4b
h. Perform simple melodies in treble or bass clef at sight.	F4b
i. Use standard notation (pitch, form, rhythm, articulation, dynamics) to perform a musical piece.	F4b
j. Demonstrate appropriate concert behavior (i.e., sitting still, listening quietly, etc.).	F4b
k. Compose simple music using traditional and/or nontraditional sound sources, including electronic.	F4b

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l. Experiment with and demonstrate understanding of variation in tempo (speed), timbre (sound quality), dynamics (degree of loudness) and phrasing for expressive purposes.	F4b
m. Notate short melodies (both pitch and rhythm) presented aurally (while listening).	F4b
n. Follow a single line of standard notation (written representation of music) while listening to music.	F4b
o. Listen to and evaluate his/her own music performances and progress using appropriate musical terminology.	F4b
p. Analyze and discuss music performed and heard in terms of musical elements (pitch, rhythm, texture, form and basic chord progressions).	F4b
q. Employ an appropriate vocabulary of musical terms to analyze music.	F4b
r. Analyze, compare, and contrast music from a variety of styles, periods and cultures.	F4b
s. Identify a variety of composers and music, and make historical connections (styles, periods and cultures) to the music.	F4b
LANGUAGES: PROFICIENCY LEVEL--INTRODUCTORY	
At the end of the Introductory Proficiency Level of studying a language in its cultural context, students will recognize some similarities and differences between the target culture and their own.	
1. Speaking: At the Introductory Level, repetition, frequent pauses and production errors can be expected. The Students Will:	
a. Use isolated words and learned phrases (two or three words at a time).	F4a
b. Use vocabulary which is sufficient for handling classroom situations and basic needs.	F4a
c. Express basic courtesies.	F4a
2. Listening/Comprehending: At the Introductory Level, repetition, rephrasing, slow rate of speech may be needed for comprehension. The Student Will:	
a. Understand short, learned statements, questions, commands and courtesies.	F4a
3. Reading/Interpreting: At the Introductory Level, phrases and sentences may require a second reading. The Student Will:	
a. Identify learned words and phrases including cognates (words recognizable in two languages and having similar meaning) and borrowed words.	F4a
4. Writing: At the Introductory Level, practical writing skills for communication will be minimal. The Student Will:	
a. Copy or transcribe familiar words or phrases and reproduce some from memory.	F4a
PROFICIENCY LEVEL--BEGINNING I	
At the end of the Beginning I Proficiency Level of studying a language in this cultural context, students will recognize similarities and differences between the target culture and their own.	
1. Speaking: At the Beginning I Level, pronunciations may still show strong first language influences. Errors may still be frequent. The Student Will:	
a. Ask simple questions.	F4a
b. Make statements using learned material.	F4a
c. Express basic courtesies.	F4a
d. Use vocabulary which is sufficient to handle classroom situations and basic needs.	F4a
2. Listening/Comprehending: At the Beginning I Level, repetition, rephrasing, slow rate of speech may be needed for comprehension. The Student Will:	
a. Understand sentence-length expressions, particularly when in context and delivered with clear, audible speech.	F4a
3. Reading/Interpreting: At the Beginning I Level, short paragraphs may require a second reading. Reading may still be limited to learned vocabulary. The Student Will:	
a. Read standardized messages, phrases or expressions, such as some items on menus, schedules, timetables, maps and signs.	F4a
4. Writing: At the Beginning I Level, usage of symbols (letters, characters, accent marks) may be partially correct. The Student Will:	

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a. Write simple fixed expressions and limited memorized material.	F4a
b. Write simple autobiographical information (e.g., name, age, address, telephone number), as well as some short phrases and simple lists(e.g., foods, classroom objects, household items).	F4a
c. Compose short sentences with guidance.	F4a
PROFICIENCY LEVEL--BEGINNING II	
At the end of beginning II Proficiency Level of studying a language in its cultural context, students will recognize similarities and differences between the target culture and their own.	
1. Speaking: At the Beginning II Level, the student is usually understood by other target language speakers. Repetition may be needed to avoid misunderstandings. The Student Will:	
a. Ask and answer common questions.	F4a
b. Respond to simple statements.	F4a
c. Initiate and sustain limited conversation in social situations.	F4a
d. Express basic needs, such as introducing self, ordering a meal, asking directions and making purchases.	F4a
2. Listening/Comprehending: At the Beginning II Level, understanding may be inconsistent. Repetition and rewording may be necessary. The Student Will:	
a. Participate in spontaneous face-to-face conversation about simple autobiographical information (e.g., name, age, address, telephone, school activities), social conventions and routine tasks, such as getting meals and receiving simple instructions and directions.	F4a
3. Reading/Interpreting: At the Beginning II Level, some misunderstandings will occur, particularly with details. The Student Will:	
a. Read and comprehend main ideas and/or facts from simple materials dealing with basic needs, such as information in advertisements or articles of interest in relevant magazines.	F4a
4. Writing: The Student Will:	
a. Create basic statements and questions about learned materials.	F4a
b. Write short, simple letters, messages, postcard, telephone messages.	F4a
PROFICIENCY LEVEL--INTERMEDIATE	
At the end of Intermediate I Proficiency Level of studying language in its cultural context, students will recognize similarities and differences between the target culture and their own.	
1. Speaking: The Student Will:	
a. Talk about familiar topics (e.g., school, weather, food, special interests) in basic conversation.	F4a
b. Ask and answer questions about basic needs as well as familiar topics (e.g., leisure time activities).	F4a
2. Listening/Comprehending: The Student Will:	
a. Understand sentence length speech on a variety of basic topics.	F4a
b. Understand content dealing with more complex topics, such as lodging, transportation, shopping, personal interests and activities.	F4a
c. Understand directions and instructions more clearly.	F4a
d. Understand short routine telephone conversations, simple messages.	F4a
3. Reading/Interpreting: The Student Will:	
a. Understand main ideas and facts from materials dealing with basic needs, individual interests and knowledge and learned materials.	F4a
4. Writing: At the Intermediate I Level, writing may contain sentences and sentence fragments and may lack organization, but is generally understandable. The Student Will:	
a. Write simple letters using information based on personal experience, daily routine and everyday events.	F4a
b. Compose simple original material on a given topic using present tense and at least one other tense as appropriate to the target language.	F4a
PROFICIENCY LEVEL--INTERMEDIATE II	
At the end of the Intermediate II Proficiency Level of studying a language in its cultural context, students will recognize similarities and differences between the target culture and	

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their own.	
1. Speaking: At the Intermediate II Level, hesitation while speaking may occur. Repetition may be required. The Student Will:	
a. Initiate, sustain and close a general conversation.	F4a
2. Listening/Comprehending: At the Intermediate II Level, listening tasks are assumed to take place in an authentic environment at a normal rate of speech. Understanding may be inconsistent. The Student Will:	
a. Understand more information during longer periods of conversation or listening activities/	F4a
b. Comprehend more main ideas and/or details on a variety of topics.	F4a
3. Reading/Interpreting: At the Intermediate II Level, authentic, legible reading materials are recommended. Some misinterpretation may occur based on the complexity of the grammar. The student may have to read material several times for comprehension. The Student Will:	
a. Read simple, connected texts about basic needs, materials of personal interest and/or knowledge.	F4a
b. Comprehends some main ideas and information from higher-level reading materials.	F4a
4. Writing: The Student Will:	
a. Create some original written materials.	F4a
b. Write simple letters, summaries of biographical data, work and school experience.	F4a
c. Take notes on familiar topics.	F4a
PROFICIENCY LEVEL--ADVANCED	
At the end of the Advanced Proficiency Level of studying a language in its cultural context, students will recognize similarities and differences between the target culture and their own.	
1. Speaking: At the Advanced Level, the student can be understood without difficulty by native or fluent speakers. The Student Will:	
a. Communicate facts and talk casually about topics of current public and personal interest, using general vocabulary.	F4a
b. Satisfy the requirements of everyday conversation, routine school and work situations.	F4a
c. Narrate and describe (e.g., events, objects, activities) with some details.	F4a
d. Participate in spontaneous, face-to-face conversation involving more complicated skills and social situations, such as elaborating, complaining and apologizing.	F4a
2. Listening/Comprehending: At the Advanced Level, comprehension may be inconsistent due to linguistic and cultural factors, such as tenses, personal space, unfamiliar gestures, slang. The Student Will:	
a. Understand main ideas and most details of oral presentations and conversations (e.g., prepared speeches, news broadcasts, interviews, short lectures).	F4a
3. Reading/Interpreting: At the Advanced Level, the student understands the main ideas and facts but misses some details. The Student Will:	
a. Read authentic materials, such as selected short stories, poetry and other literary works, articles, personal correspondence and simple technical material written for the general reader.	F4a
4. Writing: At the Advanced Level, writing may resemble literal translations from the student's first language. The Student Will:	
a. Write about a variety of topics (e.g., letters, simple notes, summaries and reports) with significant precision and detail.	F4a
INSTRUCTIONAL TECHNOLOGY: ELEMENTARY LEVEL, GRADES 6-8	
The Student Will:	
1. Identify primary functions of an operating system.	F5a
2. Investigate applications of computers in career areas such as industry, business, medicine, government, entertainment and education.	A2f, F4
3. Describe legal and ethical issues related to computers including such areas as computer copyright material, privacy, and computer viruses.	F4
4. Describe the growth and development of technology and information systems.	F4
5. Describe the use of application software including database, spreadsheet, telecommunication	F5a

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and word processor.	
6. Access, organize and utilize information with computers.	F5a
7. Participate in the design of project using multimedia computer technology (e.g., computer, graphics, sound, video) and/or publishing software.	F5a
HEALTH/SAFETY EDUCATION: GRADES 6-8	
The Student Will:	
a. Demonstrate basic first aid skills.	C2c
b. Examine how social pressures affect participation in risk-taking activities (e.g., using inhalants, starvation dieting, using steroids)	C2d
c. Identify individual and community responsibilities for protecting the environment and promoting community health.	C, E
d. Describe the dangers of prescription medication abuse.	C2d
e. Describe healthy leisure-time activities (e.g., family outings, sports, board games).	C1
f. Explain the importance of analyzing food labels for content and nutritional value.	C1a
g. Interpret physical and mental consequences of a poorly balanced diet and explain how diet choices, based upon food fads, may provide inadequate nourishment.	C1a
h. Explain the relationship between caloric intake and level of activity in weight management and describe safe methods of weight control.	C2, C3
i. Describe the risks and destructive effects of alcohol, tobacco, steroids, and other drugs on body systems.	C2d
j. Describe the effects of drug abuse on the individual, family, community and society.	C2d
k. Identify and demonstrate the steps of effective goal setting and decision making.	D3e
l. Describe techniques for coping with personal loss.	G1
m. Review ways to protect oneself from abuse.	C2
n. Identify effective ways to resolve problems and prevent violence.	G4c
o. Discuss the interrelationship of the body systems: circulatory, muscular, nervous, reproductive, respiratory and skeletal.	F4
p. Discuss the responsibilities of adolescent parenthood and its effect on future goals.	F4
q. List prevention methods and risk factors (i.e., alcohol, tobacco, stress, poor nutrition, physical inactivity) that directly contribute to noncommunicable disease including cancer, diabetes and other diseases affecting cardiovascular and respiratory systems.	C1, C2c, C2d
r. Identify, define and discuss chronic disease (i.e., arthritis, Alzheimer's) as it affects the aging population.	F4
HIV/AIDS PREVENTION EDUCATION: GRADES 7-12 School districts shall make the curriculum and materials that will be used to teach AIDS prevention education available for inspection by the parents and guardians of the students that will be involved with the curriculum and materials. Furthermore, they curriculum must be limited in time frame to deal only with factual medical information for AIDS prevention. The school districts, at least one (1) month prior to teaching AIDS prevention education in any classroom, shall conduct for the parents and guardians of the students involved during weekend and evening hours at least one presentation concerning the curriculum and materials that will be uses for such education. 70 O.S. § 11-103.3.	
No student shall be required to participate in AIDS prevention education if a parent or guardian objects in writing to such participation. 70 O.S.§ 11-103.3	
The Student Will:	
a. Research and discuss current information about HIV/AIDS in order to differentiate related facts, opinions and myths.	C2e
b. Discuss and explain the importance of sexual abstinence in adolescent relationships.	C2e
c. Demonstrate refusal skills (saying "no"), negotiation skills and peer resistance skills related to sexual health.	C2e

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	NCEO CODE
d. Explain the transmission and methods of prevention for sexually transmitted disease (STD) and Human Immunodeficiency Virus (HIV).	C2e
e. Identify risk behaviors and situations involving possible exposure to HIV.	C2e
f. Discuss the relationships between injecting drug use (IDU) and contact with contaminated blood products and the transmission of HIV.	C2e
g. Analyze the efficiency of artificial means of birth control in preventing the spread of HIV and other sexually transmitted diseases.	C2e
PHYSICAL EDUCATION: GRADES 6-8	
It is important to realize many activities and skills can fall under each of the topic headings. A small number have been selected to demonstrate the appropriateness of what is expected at the various age levels. Please note the progression of the skills listed as the child's physical development progresses. Some areas have been repeated because of the need for emphasizing those skills.	
1. The student will design and perform rhythmic activities involving physical movement with or without music, encompassing a variety of multicultural forms of movement and/or manipulative objects (e.g., tinikling, jump rope, creative movement). The Student Will:	F4b
a. Design smooth sequences demonstrating traveling, jumping, rolling, balancing and weight transfer with intentional changes in direction, speed and flow.	C3
b. Design sequences demonstrating rhythmic movement incorporating the manipulation of objects.	C3
2. The student will continue to recognize the importance of and demonstrate health-related fitness components, i.e., muscular strength and endurance, flexibility, cardiorespiratory endurance and body composition. The Student Will:	C2b
a. Describe principles of training and conditioning for specific activities.	F4
b. Correctly demonstrate various weight-training techniques.	F4
c. Analyze and categorize activities and exercise according to potential fitness benefits.	F4
d. Evaluate the roles of exercise and other factors in weight control.	C2, F4
e. Design and participate in an individualized fitness program.	C1b
f. Evaluate the time and effort needed to be given to practice if skill improvement and fitness benefits are to be realized.	F4
g. Identify long-term physiological, psychological and cultural benefits that may result from regular participation in physical activity.	C1b, C2b
3. The student will continue to demonstrate locomotor, nonlocomotor and handling skills at the appropriate level. The Student Will:	C3
a. Design and play small group games that involve cooperating with others using basic offensive and defensive strategies.	C1b, G4b
b. Combine skills competently participate in modified versions of team and individual sports.	C1b
c. Use and analyze offensive and defensive strategies in physical education games and activities.	F4
d. Explore introductory outdoor activities (e.g., orienteering, hiking, cycling).	C
4. The student will apply rules and etiquette in physical activities. The Student Will:	C, G4
a. Demonstrate appropriate conduct as an individual and as part of a group.	E, G4b
b. Apply appropriate safety rules and precautions inherent to physical education.	C2a
c. Participate with and show respect for persons of like and different skill levels.	A, G3a
d. Respect physical and mental limitations of self and others.	G3a
e. Accept and respect the decisions made by game officials, whether they are fellow students, teachers or volunteers.	E1

Oregon

Document Utilized

Curriculum Content Framework for Oregon Public Schools (March 1994)

Background

The Oregon Educational Act for the 21st Century, passed by Oregon lawmakers in 1991, identified 36 content goals. The state now is developing curriculum frameworks based on those goals. In grades K-3, the standards will be interdisciplinary. In grades 4-12, they will be by subject area: the arts, civics and government, economics, English/language arts, geography, health and physical education, history, mathematics, science, second languages, and technology. The state is also developing performance standards at grades 3, 5, 8, and 10 for 11 outcomes that students must meet to earn a Certificate of Initial Mastery. Upon completion these C.I.M. standards will likely include grade 12. The C.I.M. standards are mandatory. The state board will decide whether the content standards are mandatory or voluntary for districts.

Oregon

	NCES CODE
1. The use of diverse and emerging technologies to access and process information across the instructional areas	F5a
2. The study of technology systems, their influence on individuals and society; their development and use in various fields	F4
3. The study of the dynamics of language as central to thought and expression, giving voice to thought in conceptualizing, shaping, and representing human experience, including:	
a. Various levels of language (e.g., formal, information, colloquial, slang);	F4a
b. The structure and function of language as a symbol system;	F4a
c. Issues of stereotyping and bias in language; and	F4a
d. Understanding how language is used to influence, manipulate, and control	F4a
Identification and use of appropriate levels of language (e.g., formal, informal, colloquial, slang) in appropriate situations	F1a, F4a
Recognition of how our perceptions of differences among people (e.g., cultural, racial, ability level, gender) may enrich our lives or may lead to stereotyping, miscommunication, discrimination and the denial of human rights	G3
Separating between relevant and irrelevant information used to draw conclusion	F2a, F4a
Recognition of language used to manipulate, coerce, or control (e.g., propaganda and other persuasion techniques) and use language as an effective response to such attempts	F1a, F4a
Understand the metaphorical nature language and thought	F1a, F4a
Recognition of how clichés, euphemisms, and stereotypes are used to control thought	F4a
Recognition that varieties of English usage are shaped by social, cultural, and geographical differences	F4a
4. The view of reading, using a variety of strategies to:	
a. Construct meaning from a range of text and multimedia sources;	F3b
b. Make connections with one's own life;	F3b
c. Monitor and evaluate one's own comprehension; and	F3b
d. Analyze and reflect	F2a, F3b
Increasing level of functional vocabulary	F3b
Constructions/synthesis of meaning from within text and from a range of text and multimedia sources (e.g., recognition of cohesiveness of text and extension of themes and concepts to other texts	F3b
Reading critically to analyze, synthesize and evaluate information and arguments in text and media (e.g., identification of authors bias, explanation of complex ideas form text, identification of issues beyond the text)	F2a, F3b

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	NCEO CODE
Purposeful management of comprehension (e.g., use of before, during and after reading strategies) and the ability to adapt reading strategies to meet different purposes; (e.g.; scanning, skimming or careful reading, as appropriate)	F3b
5. The development of writing as a tool for learning, reflecting, and conveying meaning in a variety of forms and modes for a range of purposes and audiences, including the use of multiple media for publication and presentation	F3c
Use of multi-step process (e.g., generating ideas, planning, drafting, revising, editing, proofreading, and publishing/sharing) when communicating in oral, written and visual forms (e.g., learning logs, business letters, plays, says, multimedia presentations)	F3c
Writing to convey meaning through selection of appropriate modes (e.g., narrative, descriptive, expository, persuasive, and imaginative) and the incorporation of elements of more than one mode within a single piece	F3c
Communication with diverse audiences which shows and understanding of human experiences, empathy for others and growing capacity to analyze and respond to abstract issues	F2a, F3c, G3a
Purposeful management of writing skills through the analysis of writing traits (e.g., ideas and content, organization, voice, word choice, sentence fluency and conventions)	F3c
6. The development of speaking as a means for oral exchanges of information, including using language to:	F1a
a. Deliver presentations and demonstrate effective skills relevant to the audience;	F1a
b. Ask and answer questions; and	F1a
c. Communicate ideas effectively in group situations	F1a, G4b
Use of a Multi-step process (e.g., gather and organize information, draft and make notes, plan presentation) when making formal presentation in a variety of settings (e.g., assembly, debates, drama, Multi-media presentations)	F1a
Adapting presentations to fit diverse audiences, showing a growing capacity to use questioning strategies and interview techniques and to summarize conclusions from various points of view	F1a
Purposeful management through the use of speaking traits (e.g., delivery, both verbal and nonverbal; language; content; organization)	F1a
Participating in group discussion and achievement (e.g., making proposals, justifying ideas, respecting others, working toward consensus while adjusting to diverse points of view	A2a, F1a, G4b
7. The development of listening as a way of obtaining meaning through oral messages presented in a variety of media, including:	F1a
a. Identifying the purpose of an oral message;	F1a
b. Analyzing and evaluating verbal and nonverbal messages and the way they are delivered;	F1a
c. Using empathetic and appreciative listening skills to enrich understanding; and	F1a
d. Engaging in verbal and nonverbal interaction with a speaker to ensure effective communication	F1a
Discussing information heard and its purpose (e.g., dialogue, news item, report) and giving personal opinions based on what was said	F1a
Interacting with speaker to ensure effective communication (e.g., asking speaker for background information or clarification of ambiguities; considering opinions from others)	F1a
Interpretation of messages by asking connections through recurring interaction with the media or situation and use of verbal/nonverbal cues; elaboration on major contradictions within information	F1a
8. The study of how works of literature reflect, record, communicate, and influence the interpretation of human experience, including learning to:	F4b
a. Make informed analysis of the purpose and meaning of literary works;	F4b
b. Evaluate how the form and content of a literary work contributes to its message and impact;	F4b
c. Understand how literature defines and binds us as a national and global community	F4b

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	NCEO CODE
Analyze several pieces of literature written by American authors and pieces that represent diverse cultures and time periods	F4b
Identification of various literary forms (e.g., poetry, drama, biography, autobiography)	F4b
Comparing elements of fiction among literature selections and roles of figurative language in literature	F4b
Relating literature to own life and to broader human concerns, issues and possibilities, and demonstrating ways that literature form different cultures (e.g., ethnic, religious, linguistic, national groups) gives voice to both common and distinctive values, experiences, struggles, and contributions	F4b
Informed interpretations of the purpose and meaning of literary works	F4b
9. The development of the technical and problem-solving skills and knowledge necessary for creative communication and personal expression through creating and performing in the literary, visual, and performing arts (i.e., music, dance, drama)	F2a, F4b
DANCE	
Effectively demonstrate the difference between pantomiming and abstracting a gesture.	F4b
Observe and explain how different accompaniment (such as a sound, music, spoken text) can affect the meaning of a dance.	F4b
Demonstrate and/or explain how lighting and costuming can contribute to the meaning of a dance.	F4b
Create a dance that successfully communicates a topic of personal significance.	F4b
DRAMA	
Script writing by the creation of improvisations and scripted scenes based on personal experience and heritage, imagination, literature, and history	F4b
Acting by developing basic acting skills to portray characters who interact in improvised and scripted scenes	F4b
Designing by developing environments for improvised and scripted scenes	F4b
Directing by organizing rehearsals for improvised and scripted scenes	F4b
MUSIC	
Sing accurately and with good breath control throughout their singing ranges, alone, and in small and large ensembles.	F4b
Perform on at least one instrument accurately and independently, alone and in small and large ensembles, with good posture, good playing position, and good breath, bow, or stick control.	F4b
Improvise simple harmonic accompaniments and rhythmic and melodic variations.	F4b
Compose short pieces within specified guidelines, demonstrating how the elements of music are sued to achieve unity and variety, tension and release, and balance.	F4b
Read whole, half, quarter, eight, sixteenth, and dotted notes and rests in 2/4, 3/4, 4/4, 6/8, 3/8, and alla breve meter signatures.	F4b
VISUAL ARTS	
Select media, techniques, and process; analyze what makes them effective or not effective in communicating ideas; and reflect upon the effectiveness of their choices.	F2a, F4b
Intentionally take advantage of the qualities and characteristics of art media, techniques, and processes to enhance communication of their experiences and ideas.	F4b
Generalize about the effects of visual structures and functions and reflect upon these effects in their own work.	F4b
Employ organizational structures and analyze what makes them effective or not effective in the communication of ideas.	F2a, F4b
Select and use the qualities of structures and functions of art to improve communication of their ideas.	F4b
Integrate visual, spatial, and temporal concepts with content to communicate intended	F4b

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	NCEO CODE
meaning in their artworks.	
Use subjects, themes, and symbols that demonstrate knowledge of contexts, values, and aesthetics that communicate intended meaning in artworks.	F4b
LITERARY ART	
Recognition and practice with models of poetry	F4b
10. The study of how works of literary, visual and performing (i.e., music, dance, drama) art and artists reflect, record, communicate, influence, and change cultural values	F4b
DANCE	
Competently perform folk and/or classical dances from various cultures; describe similarities and differences in steps and movement styles.	F4b
Competently perform folk, social and/or theatrical dances from a broad spectrum of 20th Century America.	F4b
Learn form resources in their own community (such as people, books, videos) a folk dance of a different culture or a social dance of a different time period and the cultural/historical context of that dance; effectively sharing the dance and its context with their peers.	F4b
Accurately describe the role of dance in at least two different cultures or time periods.	F4b
DRAMA	
Researching by using cultural and historical information to support improvised and scripted scenes	F4b
Understanding context by analyzing the role of theater, film, television, and electronic media in the community and in other cultures	F2a, F4b
MUSIC	
Describe distinguishing characteristics of representative music genres and styles from a variety of cultures.	F4b
VISUAL ARTS	
Know and compare the characteristics of artworks in various eras and cultures.	F4b
Describe and place a variety of art objects in historical and cultural contexts.	F4b
Analyze, describe, and demonstrate how factors of time and place (such as climate, resources, ideas, and technology) influence visual characteristics that give meaning and value to a work of art.	F2a, F4b
LITERARY ART	
Recognition of ways oral traditions/legends/folk tales illustrate the cultural heritage of various groups	F4b
Recognition of myth as metaphor--narrative patterns which give meaning, provide direction, and make possible a sense of community	F4b
11. The study of how to make informed critical and aesthetic judgements about works of literary, visual and performing (i.e., music, drama, dance) art, based on criteria and the ongoing development of personal taste and values	F2a, F4b
DANCE	
Create a movement problem and demonstrate multiple solutions; choose the most interesting solutions and discuss the reasons for their choice.	F2a, F4b
Demonstrate appropriate audience behavior in watching dance performances; discuss their opinions about the dances with their peers in a supportive and constructive way.	F4b, G4b
Compare and contrast two dance compositions in terms of space (such as shape and pathways), time (such as rhythm and tempo), and force/energy (such as movement qualities).	F4b

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	NCEO CODE
Identify possible aesthetic criteria for evaluating dance (such as skill of performers, originality, visual and/or emotional impact, variety and contrast).	F4b
DRAMA	
Comparing and incorporating art forms by analyzing methods of presentation and audience response for theater, dramatic media (such as film, television, and electronic media), and other art forms	F4b
Analyzing, evaluating, and constructing meetings from improvised and scripted scenes and from theater, film, television, and electronic media productions	F2a, F4b
MUSIC	
Analyze the uses of elements of music in aural examples representing diverse genres and cultures.	F2a, F4b
Develop criteria for evaluating the quality and effectiveness of music performances and compositions and apply the criteria in their personal listening and performing.	F4b
Compare in tow and more arts how the characteristic materials of each art that is, sound in music, visual stimuli in visual arts, movement in dance, human interrelationships in theater) can be used to transform similar events, scenes, emotions, or ideas into works of art.	F2a, F4b
VISUAL ART	
Compare multiple purposes for creating works of art.	F4b
Analyze contemporary and historic meanings in specific artworks through cultural and aesthetic inquiry.	F2a, F4b
Describe and compare a variety of individual responses to their own artworks and to artworks from various eras and cultures.	F4b
12. The study of numeration: A strong sense constructed through the understanding of number systems, their properties, number theory, and their relationship to each other	F3a
Understand, represent, and use numbers in a variety of equivalent forms integer, fraction, decimal, percent, exponential and scientific notation).	F3a
Develop numbers sense of whole numbers, fraction, decimals, integers and rational numbers.	F3a
Understand and apply ratios, proportions, and percents in wide variety of situations.	F3a
Investigate relationships among fractions, decimals, and percents.	F3a
Represent numerical relationships in one- and two-dimensional graphs.	F3a
Extend understanding of whole number operations to fractions, decimals, integers, and rational numbers.	F3a
13. The study of measurement—electing appropriate attributes, units, and tools to measure length, capacity, weight, area, volume, time, temperature, and angle while developing formulas and procedures to solve problems	F2a, F3a
Extend understanding of the process, structure and use of systems of measurement.	F3a
Select appropriate units and tools to measure to the degree of accuracy required in a particular situation.	F3a
Extend understanding of the concepts of perimeter, area, volume, angle measure, capacity and weight, and mass.	F3a
14. The study of statistics and probability: collecting, organizing, displaying, and analyzing information; using numerical data to predict events	F2a, F3a
Model probability situations concretely (pictorially).	F3a
Carry out probability experiments and simulations.	F3a
Compare and make predictions using experimental and theoretical probability.	F3a
Construct, read, interpret tables, charts and graphs.	F3a
Make inferences and convincing arguments that are based on data analysis.	F3a

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	NCEO CODE
Evaluate arguments that are based on data analysis.	F2a, F3a
Systematically collect organize and describe data.	F3a
15. The study of mathematical procedures--operating with whole numbers, fractions, decimals, integers and rational numbers; selecting, using, and inventing appropriate methods for computing including mental computation, pencil and paper calculation, calculators, computers or other technology; and interpreting results while linking physical models to procedures	F3a
Use estimation to check the reasonableness of the results.	F3a
Develop, analyze and explain procedures for computation and techniques for estimation.	F2a, F3a
Compute with whole numbers, fractions, decimals, integers and rational numbers.	F3a
Use estimation to check the reasonableness of results.	F3a
Select and use an appropriate method for computing from among mental arithmetic, paper and pencil, calculator, and computer methods.	F3a, F5a
16. The study of patterns, functions, relationships, and algebra: Studying patterns to make conjectures about relationships; graphically representing functions to make connections within mathematics (most often using graphing calculators and computers); and using algebra (the language of mathematics) to do mathematics while exploring relationships and developing generalizations	F3a
Describe, extend, analyze and create a wide variety of patterns.	F3a
Use tables, graphs, and rules to describe and represent relationships.	F3a
Explain how a change in one quantity results in a change in another.	F3a
Show an understanding of the concepts of variable, expression and equation.	F3a
Explore the interrelationship in number situations and number patterns with tables, graphs, verbal rules and equations.	F3a
Display confidence in solving linear equations using concrete, informal and formal methods.	F3a, G2b
17. The study of geometry: Exploring shape, area, and volume to build a foundation of geometrical thinking; and using models to develop spatial visualization and extend the understanding of location, distance, patterns in space, symmetry, and coordinate geometry	F3a
Identify, describe, compare and classify geometric figures.	F3a
Visualize and represent geometric figures including developing spatial sense.	F3a
Explore transformations of geometric figures.	F3a
Represent and solve problems using geometric models.	F3a
Apply geometric properties and relationships.	F3a
18. The study of science facts, concepts, principles and theories from physical systems, earth and space systems, and life systems that provide a foundation for understanding and applying science	F4a
Recognize that evolution is the process of change over time.	F4a
Recognize states of matter and energy.	F4a
Demonstrate that energy is required to change states of matter.	F4a
Recognize that the interaction of energy and matter determine the nature of the environment.	F4a
Demonstrate an understanding of the effect that one of the life processes has on another life process.	F4a
Predict and explain the outcome of situations where forces interact.	F4a
Relate types of symmetry to function in natural systems.	F4a
19. The study of science as inquiry, a set of interrelated processes by which scientists pose questions, investigate phenomena, and cultivate deeper understanding about the natural world	F4a
Define and give examples of theories.	F4a
Identify examples of historic changes in scientific theories.	F4a
Compare examples of theories which have changed over time.	F4a
Judge strengths and weaknesses of theories.	F2a, F4a

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		NCEO CODE
	Hypothesize to explain relationships between several events or objects.	F4a
	Recognize a system and compare interactions among the parts of a system.	F4a
	Classify input and output within a system.	F4a
	Explain interrelationships of the components of systems.	F4a
	Identify factors which may influence the outcome of an experiment.	F4a
	Recognize the controlled variables in an experiment and the variables being tested.	F4a
	Identify the importance of replicating experiments.	F4a
20.	The study of connections among and within the natural sciences, between science and mathematics, and between science and technology/engineering	F4a
	Recognize scientific principles, concepts and theories that apply across science disciplines.	F4a
	Investigate science based relevant issues using multiple science disciplines.	F4a
	Determine appropriate units of measurement for scientific investigation.	F4a
	Determine the location of an object relative to another object using appropriate measurements and units.	F4a
	Design tables, graphs and charts to show investigative results.	F4a
	Develop a historical perspective of the interrelationship between scientific understanding and advancement in technology.	F4a
21.	The study of how science and technology are influenced by and, in turn, influence the culture and context in which they operate	F4a
	Develop an understanding of how scientific knowledge influences societies attitudes.	F4a
	Develop an understanding of how individual wants and needs are positively and negatively influenced by technology.	F4a
	Identify scientific and technological developments which have positively and negatively affected society.	F4a
22.	The study of history, including:	F4a
a.	The development and changing character of human societies;	F4a
b.	The economic and technological development of human societies in the quest to sustain and improve life;	F4a
c.	People's development of their understanding of themselves, their place in the universe, and	F4a
d.	The development of political theories, organizations, and institutions	F4a
	CHRONOLOGICAL THINKING	
	Explain patterns of historical continuity and change in the historical succession of related events unfolding over time.	F4a
	In developing historical narratives, including biographies, historical arguments, and stories, impose temporal structure upon their data: working forward from some initiating event to follow its development and transformations, to some outcome over time; working backward from some issue, problems or even to explain its causes, arising form some beginning and developing through subsequent transformations over time.	F4a
	HISTORICAL COMPREHENSION	
	Read and understand primary sources such as the United States Declaration of Independence. Recognize that understanding requires not only what the words say, but where such ideas arose and how they evolved from earlier ideas.	F4a
	Determine the causes and consequences of events and demonstrate their understanding through various techniques.	F4a
	HISTORICAL ANALYSIS AND INTERPRETATION	
	Determine an author's frame of reference in primary and secondary sources and form analytical questions to examine the data and to determine bias in documents and historical narratives.	F4a
	Consult multiple sources reflecting differing interpretations of a historic event or individual.	F4a

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	NCEO CODE
HISTORICAL ISSUES, ANALYSIS, AND DECISION-MAKING	
Identifying factors which led to a historical issue, define the problems involved in its resolution, and explain the motives, values, and varying perspectives surrounding the problem. Explore various attitudes regarding these policy decisions, the factors which led to their enactment, and form warranted value judgements regarding the timing and the scope of these decisions	F2a, F4a
Assume the role of an individual and explain a policy issue from the perspective of that individual within the context of time and place.	F4a
Analyze individual decisions and grapple with the personal dilemmas encountered in pursuing a course of action.	F2a, F4a
In reaching value judgements regarding the course of action taken by individuals in history, students should be able to weigh the influence of attitudes, values, and alternative options of that particular time and place.	F2a, F4a
Analyze the historical circumstances and reach warranted ethical judgements concerning such events.	F2a, F4a
HISTORICAL RESEARCH	
In researching topics, students should be able to formulate questions to guide and focus research.	F4a
Draw from a variety of primary and secondary sources including diaries, letters, periodicals, literature, oral histories, artifacts, art, and documentary photographs and films in historical research.	F4a
U.S. HISTORY, ERA 1 (BEGINNING TO 1620): THREE WORLDS MEET	
The basic characteristics of societies in the Americas, Western Europe, and West Africa that increasingly interacted after 1450	F4a
Early European exploration and colonization, and the resulting cultural and ecological interactions	F4a
U.S. HISTORY, ERA 2 (1585-1763): COLONIZATION AND SETTLEMENT	
The early arrival of Europeans and Africans in the Americas and how these people interacted with Native Americans	F4a
How political institutions and religious freedom emerged in the North American colonies	F4a
How the values and institutions of European economic life took root in the colonies and how slavery reshaped both European and African life in the Americas	F4a
U.S. HISTORY, ERA 3 (1754-1820S): REVOLUTION AND THE NEW NATION	
The causes of the American Revolution, the ideas and interests involved in forging the revolutionary movement, and the reasons for the American victory	F4a
How the American Revolution affected the social and economic relations among the new nation's many groups and regions	F4a
U.S. HISTORY, ERA 4 (1801-1861): EXPANSION AND REFORM	
United States territorial expansion between 1801 and 1861 and how it affected relations with external powers and Native Americans	F4a
How the industrial revolution, the rapid expansion of slavery and the settlement of the West in the first half of the 19th century changed the lives of Americans and led toward regional tensions	F4a
The extension, restriction and reorganization of political democracy after 1800	F4a
The sources and character of religious, social and political reform in the antebellum period and what the reforms accomplished or failed to accomplish	F4a
U.S. HISTORY, ERA 5 (1850-1877): CIVIL WAR AND RECONSTRUCTION	
The causes of the Civil War	F4a
The course and character of the Civil War and its effect on the American people	F4a

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	NCEO CODE
Reconstruction plans and their successes and failures	F4a
U.S. HISTORY, ERA 6 (1870-1900): THE DEVELOPMENT OF THE INDUSTRIAL U.S.	
The transformation of American life by the rise of big business, heavy industry, and mechanized farming	F4a
Massive immigration after 1870 and the new social patterns, conflicts, and ideas of national unity amidst growing cultural diversity	F4a
Rise of the American labor movement and the political issues which reflected the social and economic changes of the era	F4a
Federal Indian policy and United States foreign policy that emerged after the Civil War	F4a
U.S. HISTORY, ERA 7 (1890-1930): THE EMERGENCE OF MODERN AMERICA	
Attempts to address the problems of a modern, urbanizing industrial society by Progressives and others	F4a
The changing roles of the United States in world affairs during the progressive era through World War I	F4a
How the United States changed from the end of World War I to the eve of the Great Depression	F4a
U.S. HISTORY, ERA 8 (1929-1945): THE GREAT DEPRESSION & WORLD WAR II	
The causes and consequences of the Great Depression	F4a
The Roosevelt presidency, the New Deal, the transformation of American federalism, and the development of the welfare state	F4a
The origins and course of World War II, the character of the war at home and abroad, and its reshaping of the U.S. role in the world affairs	F4a
U.S. HISTORY, ERA 9 (1945-EARLY 1970S): POST-WAR UNITED STATES	
Economic and social change in postwar America	F4a
Major postwar political decision from Truman to Johnson	F4a
The Cold War and the Vietnam conflict in domestic and international policies	F4a
Issues concerning racial and gender equality and civil liberties	F4a
U.S. HISTORY, ERA 10 (1968-PRESENT): CONTEMPORARY UNITED STATES	
Major developments in United States foreign and domestic policies in the Nixon, Ford, and Carter administrations	F4a
Conservative resurgence under Reagan and Bush and the end of the Cold War	F4a
The continuing struggle for equality amid a new era of immigration	F4a
WORLD HISTORY, ERA 1: THE BEGINNINGS OF HUMAN SOCIETY	
The biological and cultural processes that gave rise to the earliest human communities	F4a
The processes that led to the emergence of agricultural societies around the world	F4a
WORLD HISTORY, ERA 2 (4000-1000 BCE): EARLY CIVILIZATIONS AND THE RISE OF PASTORAL PEOPLES	
The major characteristics of civilization and how civilization emerged in Mesopotamia, Egypt, and the Indus valley	F4a
Agrarian societies spread and new states emerge in the third and second millennia BCE	F4a
The political, social, and cultural consequences of population movements and militarization in Eurasia in the second millennium BCE	F4a
WORLD HISTORY, ERA 3 (1000 BCE-300 CE): CLASSICAL TRADITIONS, WORLD FAITHS, AND EXTENSIVE EMPIRES	
Empire-building, trade, and migrations contribute to increasingly complex relations among peoples of the Mediterranean basin, Africa, and Central Asia, 1000-600 BCE	F4a

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	NCEO CODE
The rise of Aegean civilization and the interrelations that developed between Hellenism and the cultural traditions of Southwest Asia and Egypt, 600-200 BCE	F4a
The rise of large-scale empires in the Mediterranean basin, China, and India 600 BCE--300 CE	F4a
The rise of early agrarian civilizations in Mesoamerica	F4a
WORLD HISTORY, ERA 4 (300-1000 CE): EXPANDING ZONES OF EXCHANGE AND ENCOUNTER	
Imperial crises and their aftermath, 300-700 CE	F4a
Causes and consequences of the rise of Islamic civilization between the seventh and tenth centuries	F4a
Major developments in East Asia in the era of the Tang dynasty, 600-900 CE	F4a
The search for political and social order in Europe, 500-1000 CE	F4a
The spread of agrarian populations and rise of states in Africa south of the Sahara	F4a
The rise of centers of civilization in Mesoamerica and Andean South America in the first millennium C	F4a
WORLD HISTORY, ERA 5 (1000-1500 CE): INTENSIFIED HEMISPHERIC INTERACTIONS	
The maturing of an interregional system of communication, trade, and cultural exchange in an era of Chinese economic power and Islamic expansion	F4a
The rise of European society and culture, 1000-1300 CE	F4a
The rise of the Mongol empire and its importance for Afro-Eurasian peoples, 1200-1350	F4a
The growth of states, towns, and trade in Sub-Saharan Africa between the 11th and 15th centuries	F4a
Patterns of crisis and recovery in Afro-Eurasia, 1300-1450	F4a
The expansion of states and civilizations in the Americas, 1000-1500	F4a
WORLD HISTORY, ERA 6 (1450-1770): GLOBAL EXPANSION AND ENCOUNTER	
How the trans-oceanic interlinking of all major regions of the world in the 1450-1600 period led to important global transformations	F4a
How European society experienced political, economic, and cultural transformations in an age of global intercommunications, 1450-1750	F4a
How large territorial empires dominated much of Eurasia between the 16th and 18th centuries	F4a
Economic, political, and cultural interrelations among peoples of Africa, Europe, and the Americas, 1500-1750	F4a
How Asian societies responded to the challenges of expanding European power and forces of the world economy	F4a
WORLD HISTORY, ERA 7 (1750-1914): THE AGE OF REVOLUTIONS	
The causes and consequences of political revolutions in the late 18th and 19th centuries	F4a
The causes and consequences of the agricultural and industrial revolutions, 1700-1850	F4a
The transformation of Eurasian societies in an era of global trade and rising European power, 1750-1850	F4a
Patterns of nationalism, state-building, and social reform in Europe and North America, 1830-1914	F4a
Patterns of global change in the era of Western military and economic domination, 1850-1914	F4a
WORLD HISTORY, ERA 8: THE TWENTIETH CENTURY	
The causes and global consequences of World War I	F4a
The search for peace and stability in the years between the wars	F4a
The causes and global consequences of World War II	F4a
How new international power relations took shape following World War II	F4a

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		NCSS CODE
	Promises and paradoxes of the second half of the 20th century	F4a
23.	The study of geography, including the where and why of location, the physical and human-environment interactions and global connections and interdependence	F4a
	The characteristics of maps, globes and other geographic tools and techniques	F4a
	How to use latitude and longitude to plot locations of physical and human sites	F4a
	Concepts of axis, major parallels, seasons, rotation, revolution, great circles	F4a
	The purposes and distinguishing characteristics of different map projections, including distortion on flat map projections	F4a
	The advantages and disadvantages of maps, globes and other geographic tools to illustrate specific data	F4a
	How to use different types of scales	F4a
	How to use thematic maps	F4a
	When to use alternate units of measure to compute and compare distance between places	F4a
	The location of places, geographic features and patterns of the environment	F4a
	The location of major seas and gulfs	F4a
	The location of key physical features (e.g., mountain ranges, desert, forest, rain forest) of the Earth	F4a
	The location of states and provinces of the United States and Canada	F4a
	The location of major cultural features of the world (e.g., Great Wall of China)	F4a
	The characteristics and uses of spatial organization of the Earth's surface	F4a
	Distribution of physical and human occurrences with respect to observable patterns, association, and densities (why some areas are more densely settled than others; relationships and patterns in the kind and number of links between settlements)	F4a
	Factors that influence location decisions (retailers may be influenced by location near customers, next to a busy store, or on a heavily traveled street; jobs and climate influence people's decision about where to live; locations of certain economic activities are influenced by natural resources, transportation, and labor)	F4a
	Patterns of land use in urban, suburban and rural areas (land uses that are frequently nearby and others not frequently adjacent to one another; dominant land-use patterns in city centers and peripheral areas)	F4a
	The different ways that places are connected and how these connections demonstrate interdependence, accessibility, or factors related to distance (e.g., where classmates were born and now live; where sports teams travel to play; imports and exports at different seasons of the year; regions and countries American depend on for resources and manufactured goods)	F4a
	The patterns and processes of diffusion (spread of language, religion and customs from one culture to another; spread of a contagious disease through a population; diffusion patterns of animals, insects, and plants)	F4a
	The physical and human characteristics of place	F4a
	Human characteristics of places (e.g., cultural characteristics such as religion, language, politics, technology, family structure, gender; population characteristics ; land uses, level of development)	F4a
	Physical characteristics of places (e.g., soils, land forms, vegetation, wildlife, climate, natural hazards)	F4a
	How the interaction of human activities and natural environments produces distinctive places (e.g., variations in culture, economic activities, topography, climate, population, technology)	F4a
	The concept of regions	F4a
	Regions at various scales (e.g., hemispheres, regions within continents, within countries, within cities)	F4a

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	NCEO CODE
Criteria that give a region identity (e.g., central focus of a region, physical and cultural characteristics)	F4a
The effects of regional change (e.g., regions that were characterized in a particular ways at an earlier time have very different characteristics today; results of regional change in the daily lives of people)	F4a
Regional subdivisions (how continents, countries, states of provinces, metropolitan areas, suburbs, or neighborhoods are divided based on human or physical characteristics)	F4a
The influences and effects of particular regional labels and images (e.g., the Gold Coast neighborhood of Chicago, the South, the Midwest, the Middle East, South West Asia, "developing" vs. "less-developed" regions, "have" vs. "have-not" regions	F4a
Ways regional systems are interconnected (e.g., watersheds and river systems, regional connections through trade, cultural times between regions)	F4a
That culture and experience influence people's perception of places and regions	F4a
How people's values (based on culture, previous experience, and economic circumstances) affect their perception of places and regions (e.g., cities as safe or unsafe places; the Great Plains as barren or beautiful; places or regions as symbols of freedom or oppression)	F4a
Physical processes that shape patterns on Earth's surface	F4a
The major processes that shape patterns in the natural environment (e.g., weather; gravity; erosion; ocean currents; tectonic processes such as those that produce earthquakes and volcanoes; earth movements such as landslides, alluvial fans, sand dunes, barrier islands, moraines)	F4a
The processes that produce renewable and non-renewable resources (e.g., fossil fuels, hydroelectric power, soil fertility)	F4a
Terms that relate to physical patterns and processes (system, boundary, force, circulation, threshold, equilibrium)	F4a
Fundamental concepts of physical geography that explain physical processes (e.g., deposition sediments on flood plains; formation of canyons, gorges, water falls; landslides, avalanches; global circulation systems of the atmosphere and oceans)	F4a
Characteristics of ecosystems on Earth's surface	F4a
Components and functions of natural cycles (e.g., water, nutrients) and relationships among them	F4a
Ecosystems (e.g., plant and animal life) in various parts of the world	F4a
Ecological concepts (e.g., energy, cycles, diversity, community , interrelationship, change, adaptation) and how they are evident in the world's biomes	F4a
Local to global ramifications of changes in an ecosystem (consequences of building a dam on a free-flowing rive in relation to wildlife habitats, vegetation cover, and the control of flooding downstream; effects of major natural events, such as storms and floods, on the lives of individuals and communities; effect of climate on people in different areas of the world)	F4a
The environment has limited capacity to absorb the impacts of human activity (habitats) of endangered species and causes of species endangerment; why governments impose laws that regulate human use of preserved areas and animals; effects of human activate on the flora and fauna of a community	F4a
The nature, distribution, migration and movement of human population on Earth's surface	F4a
Demographic concepts and how they are related to population characteristics of a country or region (.e.g.., birth rates, death rates, population growth rate, doubling time, life expectancy, average family size, average age)	F4a
Factors that influence patterns of rural-to-urban and intra-urban migration (e.g., urban commuting; effects of technology on transportation, communication, and people's mobility; barriers that impede the flow of people, goods, and ideas)	F4a

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	NCEO CODE
Concepts related to migration such as "push and pull" (political, economic, religious forces), "opportunities", and "obstacles"	F4a
The ever-changing nature of population patterns and the effects of these changes (e.g., environmental change; positive and negative consequences for a place; the spread of culture traits and diseases)	F4a
The nature and complexity of Earth's cultural mosaics	F4a
The world's major culture regions and the cultural criteria used to influence regional boundaries (e.g., cultural phenomena, land use, language, technology, economic activity, population density in specific regions)	F4a
The adjustments traditional and modern societies make to their physical environments (the increased use of coal as an industrial fuel in 19th century Europe and the U.S. significantly altered landscapes in Wales, the Appalachians, and the Ruhr Valley)	F4a
How human occupants patterns differ in similar physical environments (e.g., the adaptations of the Lapps and Inuit to similar Arctic landscapes, or the uses of desert regions by Mongolian nomads in the Gobi and Berbers in the Sahara)	F4a
The role of technology in helping to define a human group's style of life (the impact of the auto, perceptions of resources)	F4a
The patterns and networks of economic interdependence on Earth's surface	F4a
Patterns of primary economic activity in the U.S. and elsewhere (e.g., national and global markets, the relationship between agricultural regions and food-processing industries, governmental economic programs)	F4a
How geography, the factors of production, and economic theories have played a role in the location of American industry (rise and persistence of American "Manufacturing Belt," evolution of *maquiladoras*; the many American industrial jobs that have been exported to other countries; the choice of other countries to move industrial operations to the U.S.	F4a
The relationship between economic factors and national and global migration patterns (slaves, guest workers, seasonal or migrant labor)	F4a
The structure, function, and issues of cities and other settlement types with respect to provision of goods and services (e.g., gentrification, ghetto, poverty, public transportation, hierarchy of central places, concentric growth)	F4a
The primary causes of major elements in the system of world trade (e.g., comparative advantage, tariffs, protectionism, free trade)	F4a
Historic and contemporary patterns of origin-and-destination networks (e.g., triangular trade routes of the 16th and 17th centuries; migration patterns; economic relationships between colonies and motherlands)	F4a
Historic and contemporary systems of transportation and communication (e.g., canals, major world ports, air freight, telegraph, satellites), how they have changed and improved over time, and how they have affected patterns of economic interaction	F4a
Issues related to economic development which involve the technologically advanced and developing worlds (e.g., population growth, consumption and waste generation patterns, environmental quality)	F4a
The patterns of human settlement and their causes	F4a
Ways that urban and rural planning (e.g., zoning and other government rules and regulations, property owner's rights, people's preferences) influence patterns of settlement	F4a
The relative advantage of certain locations for the growth of cities (fertile flood plains in the middle latitudes and on the coastal plains)	F4a
Similarities and differences in various settlement patterns of the world (residential areas, rural and urban areas, transportation arteries, industrial and commercial areas, recreational areas, similarities to his/her own community)	F4a
Forces of cooperation and conflict that shape the divisions of Earth's surface	F4a

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	NCEO CODE
The location of major political conflicts	F4a
Factors that contribute to cooperation (e.g., religion, language, a regional planning commission) or conflict (e.g., resources, political beliefs, cultural differences, desire for self rule) within and between regions and countries	F4a
Divisions of the earth's surface that result from cooperation or conflict among people.	F4a
Social, political, and economic divisions on Earth's surface at local, state, national, and international levels (e.g., world religions; political alliances; franchises, branches, and regional districts within large economic organizations)	F4a
How Earth's physical and human systems are connected and interact.	F4a
That humans depend on and get feedback from natural and physical systems.	F4a
The effects of physical events (earthquakes, volcanic eruptions, hurricanes, tornadoes) on humans and on their perceptions of the environment	F4a
Different natural environments in terms of opportunities and constraints for different groups at various levels of technology and economic development	F4a
Major kinds of land and resource use associated with agriculture, manufacturing, forestry, mining, urbanization, and transportation (distribution of the land use, major factors influencing its location, resources the land use depends upon)	F4a
Factors that cause physical and human systems to change over time (land use, technology, economic systems, population growth, etc. have led to changes in the atmosphere; urban-to-rural migration changes the number and density of people in the city)	F4a
The influence of the natural environment on urban development (the relationship between soil type and land form and building-type, or between earthquake hazard and construction practice)	F4a
The consequences of the interactions between human and physical systems (2 & 3 only)	F4a
How contemporary land use and other human activity affect physical systems (the effects of farming, forestry, fishing, and transportation on air land, water, and vegetation; and other species; and the effects of population on waste generation and disposal; effects of war)	F4a
The positive and negative effects of human interaction with physical systems (effects of industrialization and agribusiness on quality of life; intended and unintended outcomes of technological changes such as automobiles, freeways, nuclear energy, steel-tipped plows), and ways these effects could be ameliorated	F4a
The consequences of changes in a physical system on a human system or another physical system (changes in climatic system in mid-latitude grasslands;ands causes drought and threaten human uses of the environment; building a dam on a free-flowing river affects wildlife habitats, vegetation, and the need for water or control of flooding downstream; how environmental changes in one part of the world can impinge on other parts of the world	F4a
The changing meaning and importance of resources	F4a
The role resources have played in opening new territories and changing settlement patterns (the California Gold Rush, creation of ghost towns in the American West; the fur trade that lured the French and British to the American Northwest; the early development of Pittsburgh, Pennsylvania; the Soviet expansion into Siberia)	F4a
Strategies for wise management and use of renewable, flow, and nonrenewable resources (wise management of agricultural soils, fossil fuels, and alternative energy sources; community programs for recycling or reusing materials)	F4a
The advantages and disadvantages of various forms of energy development (hydroelectricity, nuclear energy, fossil fuels, alternative energy sources)	F4a
How major events and national attention affect the use and misuse of resources (the book *Silent Spring* by Rachel Carson; the annual Earth Day celebration; major oil spills such as Exxon Valdez; nuclear accidents such as Chernobyl and Three Mile Island; battle between Love Canal and the Hooker Chemical Company over the disposal of toxic wastes)	F4a

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	NCEO CODE
Reasons for conflicting viewpoints regarding how resources should be used (attitudes regarding how resources have improved quality of life; attitudes regarding species extinction; attitudes regarding environmental outcomes of extracting resources; attitudes regarding the position, "the greatest good for the greatest number of people")	F4a
How geography is used to interpret the past	F4a
Geographical concepts relating to the opening of territory and settlement patterns in the United States (Manifest Destiny, frontier, wilderness, metes and bounds, township land survey, long lots, "staking a claim")	F4a
The territorial evolution of the united States (extent of the 13 colonies and territories, areas added to the United States until the present-day boundaries were achieved; outcomes of territorial acquisitions such as the Louisiana Purchase and the Treaty of Guadeloupe Hidalgo)	F4a
The role of great explorers and mappers in opening new territories in the United States (Zebulon Pike, John Wesley Powell, the Lewis and Clark expedition)	F4a
Global development and environmental issues	F4a
The strengths and weaknesses of the used to classify uneven development in different regions (developed, developing, underdeveloped; rich and poor; industrialized and non-industrialized; commercial economy and subsistence economy; modern and traditional; First, Second, third, and Fourth Worlds; theory of demographic transition).	F4a
Ways in which development can be measured (gross national product, literacy rate, employment trends)	
The term sustainable government and how it is related to environmental and resource management (human attempts to limit stress on ecosystems such as local ordinances that establish criteria for strip mall development, privately funded planning grants to study the location of an international airport, crop rotation, preservation of open space, maintaining constant stocks of renewable resources).Ways in which local behavior can affect other parts of the world over time	F4a
24. The study of economics, including:	
a. How economic systems function to address issues of resource allocation, income distribution, and economic stability and growth;	F4a
b. The kinds and functions of economic institutions; and	F4a
c. Concepts for evaluating economic actions and policies	F4a
How the scarcity of productive resources (human, capital, technological and natural) requires the development of economic systems to ma decisions about how goods and services are to be produced and distributed	F4a
How different values and beliefs affect different economic decisions	F4a
The differences between private and public goods and services	F4a
Examples of the various institutions which make up economic systems such as households, business firms, banks, government agencies, labor unions, and corporations	F4a
The role of specialization and exchange in the economic process	F4a
The role that supply and demand, price incentives, and profits play in determining what is produced and distributed in a competitive market system	F4a
How to differentiate among different forms of exchange and money	F4a
How economic systems compare in regard to who determines what is produced, distributed, and consumed	F4a
How to use economic concepts to help explain both historical and current social issues	F4a
How to use economic reasoning to compare different proposals for dealing with a contemporary social issues such as unemployment, acid rain and high quality education	F4a
25. The study of comparative civics and government, including:	
a. The purposes of government and the role of law in societies;	F4a
b. The foundation of the American political system;	F4a

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	NCEO CODE
c. How the government established by the Constitution embodies the principles and purpose of American democracy;	F4a
d. The relationship of American politics and government to world affairs; and	F4a
e. The roles of the citizen in the American political system	F4a
What are the foundations of the American political system?	F4a
The fundamental ideas of the American constitutional government and their importance for the protection of individual rights and the promotion of the common good	F4a
The meaning and importance of the fundamental values and principles of American constitutional democracy	F4a
Common attitudes and beliefs of Americans toward society, politics, and government	F4a
The value and challenges of diversity in American life	F4a
The importance of shared political values and principles to American society	F4a
Dispositions or traits of character which may enhance a person's effectiveness in participating in our constitutional democracy and in promoting its healthy functioning	F4a
How does the government established by the Constitution embody the principles and purposes of American democracy?	F4a
How the U.S. Constitution delegates power to institutions of the national government	F4a
Why the Constitution provides for the sharing of power within the national government	F4a
How the Constitution organizes the powers of the national government in order to prevent their abuse	F4a
The essential elements of the American federal system and why the Framers adopted this system in which the powers of government are shared by the national and state governments	F4a
How domestic policies of the national government affect(ed) a citizen's daily life, protect(ed) individual rights, and provide(d) for the common defense and general welfare	F4a
The constitutional basis of the government's authority to levy taxes, the necessity of taxes, and the purposes for which taxes are used	F4a
Why states have their own constitutions and the relationship of state constitutions to the federal constitution	F4a
The organization and major responsibilities of state and local government	F4a
How law is used to protect individual rights and promote the common good	F4a
How law is used to manage conflict in American society	F4a
How political parties, campaigns, and elections provide opportunities for citizens to participate in the political process	F4a
How interest groups, unions, and professional organizations provide opportunities for citizens to participate in the political process	F4a
How religious, charitable, service, and civic groups provide opportunities for individuals to participate in the political process	F4a
How citizens can acquire and evaluate information about public issues	F4a
What is the relationship of American politics and government to world affairs?	F4a
How the world is organized politically	F4a
How nation-states interact with each other	F4a
How United States foreign policy is made and the means by which it is carried out	F4a
The role of major international organizations in the world today	F4a
The influence of American political ideas on other nations	F4a
Proposals for dealing with significant political, demographic, and environmental developments in the world	F4a
What are the roles of the citizen in the American political system?	F4a
The meaning of citizenship in the United States	F4a
How one becomes a citizen of the United States	F4a
The importance of citizens fulfilling their personal responsibilities in order for constitutional democracy to flourish	F4a

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	NCEO CODE
The importance of citizens fulfilling their public responsibilities	F4a
The relationship between participating in public life and the attainment of individual and public goals	F4a
The means by which citizens may monitor and influence the formation and implementation of public policy	F4a
The importance of political leadership and public service in a constitutional democracy	F4a
How to apply criteria to evaluate issues, positions, and actions of political leaders	F4a
26. The study of core ethical values which our society shares and holds important including, but not limited to, respect, responsibility, trustworthiness, caring, honesty, justice and fairness, citizenship, and civic involvement	F4a
Models of the core ethical values through literature and history	F4a
The importance of the core ethical values to individuals and society	F4a
Meanings of the core ethical values at the appropriate developmental level (i.e., what does it mean to be fair? What does it mean to be trustworthy?)	F4a
Introduction to values dilemmas (i.e., circumstances in which two or more "good" values come into conflict)	F4a
Why it is sometimes difficult to practice the core ethical values (i.e., needs and desires of self versus needs and desires of others)	F4a
27. The study of one's own cultural heritage, our nation's heritage and the diverse cultural traditions and contributions of other peoples and nations to that heritage	F4a
The commonalities and differences in the ways groups, societies, and cultures address similar human needs and concerns	F4a
How experiences may be interpreted differently by people from diverse cultural perspectives and frames of references	F4a
Ways in which language, stories, folktales, music, and artistic creation as expressions of culture influence behavior of people living in a particular culture	F4a
Ways in which people from different cultures compare in the ways they think and deal with their physical environments and social conditions	F4a
Examples of the importance of cultural unity and diversity within and across groups	F4a
The ways family, gender, ethnicity, nationality and institutional affiliations contribute to personal identity	F4a
Personal connections to places associated with one's cultural heritage	F4a
28. The study of interactions among diverse individuals, groups (e.g., ethnic, age), institutions (e.g., family, school), and systems (e.g., economic, political)	F4a
Concept of role, status, and social class related to interactions of individuals and groups	F4a
The various forms institutions take and their interactions with people	F4a
Examples of tensions between belief systems and government policies and laws	F4a
Examples of tensions between expressions of individuality and group or institutional efforts to promote social conformity	F4a
The role of institutions in furthering both continuity and change	F4a
Group and institutional influences on people, events, and elements of culture	F4a
How to apply knowledge of how groups and institutions work to meet one's personal needs and promote the common good	F4a
29. SEE #10 ABOVE	
30. The development of speaking, listening, reading and writing in a second language (with emphasis on speaking and listening) within the appropriate cultural contexts	F4a
Throughout Stage 3 students will develop the ability to:	
1. Perform all the functions described in Stages 1 and 2 plus:	

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	NCEO CODE
a. Engage in conversations (Function) in social interaction which is face-to-face (Context) using sentences (Text Type) which demonstrate increasing proficiency and control of vocabulary with no significant pattern of errors (Accuracy in Familiar Situations). The message will be comprehensible and culturally appropriate but some pattern of error may prevent full comprehension;	F4a
b. Express likes and dislikes (Function) in social interaction which is face-to-face, in lists, surveys, notes, and postcards (Context) using sentences (Text Type) which demonstrate increasing proficiency and control of vocabulary with no significant pattern of errors (Accuracy in Familiar Situations). The message will be comprehensible and culturally appropriate but some pattern of error may prevent full comprehension;	F4a
c. Provide and obtain specific information (Function) in social interaction which is face-to-face, from letters, ads, tickets, brochures, signs, readings, and video (Context) using questions, polite commands and short sentences (Text Type), which demonstrate increasing proficiency and control of vocabulary with no significant pattern of errors (Accuracy in Familiar Situations). The message will be comprehensible and culturally appropriate but some pattern of error may prevent full comprehension;	F4a
d. Understand important ideas and a few details (Function) from culturally authentic spoke and written discourse, using visual and written media (Context) at the sentence level in the productive mode and understanding short texts enhanced by visual clues (Text Type), which demonstrate increasing proficiency and control of vocabulary with no significant pattern of errors (Accuracy in Familiar Situations). The message will be comprehensible and culturally appropriate but some pattern of error may prevent full comprehension; and	F4a
e. Express important ideas and a few details (Function) in face-to-face interaction, notes and letters, short paragraphs (Context), at the sentence level in the oral mode and in simple paragraph form in the written mode (Text Type) which demonstrate increasing proficiency and control of vocabulary with no significant pattern of errors (Accuracy in Familiar Situations). The message will be comprehensible and culturally appropriate but some pattern of error may prevent full comprehension.	F4a
31. The study and practice of individual physical, social, and emotional health strategies, including assessing and managing controllable health risks and safe/healthy environments	C1, C2, C3, F4
Controllable Health Risks. The healthy student can identify, understand, assess (physical, emotional, and social strategies) and manage appropriately the following controllable health risks:	
a. Tobacco;	C2d
b. Alcohol and other drugs;	C2d
c. Teen pregnancy, STD, AIDS/HIV;	C2e
d. Unintentional/intentional injuries;	C2, C2a
e. Obesity; and	C3a
f. Physical inactivity.	C3a
Examine the role of individual responsibility regarding personal risk behaviors.	C2d
Rebut media messages which encourage negative health behaviors.	F4
Evaluate personal health risks.	C1, C2
Demonstrate strategies to improve personal, family, and community health.	A2e, C1, D1a
Assess the influence of information from peers, family, and community on current personal health.	F2a, F4
Convey accurate health information and ideas to both individuals and groups.	F1a
Analyze situations that require professional health care services.	C2c, F2a
Analyze potential impact of common risk behaviors on quality of life.	C2d
Examine the role of individual responsibility regarding personal risk behavior.	C2d
Safe and Healthy Environments. The healthy student is able to create, support and be supported by safe and healthy environments.	C1, D1a, D3c, D3d
Demonstrate skills for resisting abuse or exploitation.	C2

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	NCEO CODE
Demonstrate the methods of avoiding threatening situations involving other people.	C
Demonstrate methods to obtain assistance when confronted with dangerous circumstances.	C2, D3c
Identify action that can be taken by individuals living in an abusive situation.	F4
Demonstrate refusal and negotiation skills.	F1a
Employ positive strategies to prevent conflict in school.	G4c
Analyze the impact of the environment on health.	F4
Demonstrate first aid procedures for responding to and preventing further injury.	C2c
Demonstrate safety procedures for appropriate natural disasters (earthquake, fire, etc.).	C2a
32. The development of lifetime wellness behaviors including physical strength, flexibility, cardiovascular endurance, and movement skills	C1
Lifetime Wellness. The healthy student understands the importance of living a healthy life for an entire lifetime and develops a commitment to practicing lifetime wellness.	C1
Describe the interrelationships of and the physiological changes in body systems.	F4a
Correlate the relationship between positive health behaviors and the prevention of injury, illness, disease, and other health problems.	C1, C2a, C2b, C2c
Identify the most common health issues for adolescents.	C2a, F4
Describe how family and peers influence the health of individuals.	F4
Describe the interrelationship of physical, intellectual, emotional, social health during adolescence.	F4
Recognize that most causes of premature death can be prevented by positive health practices and appropriate health care.	C1, C2c
Compare health information from a variety of resources for accuracy; analyze the impact of media, technology, and other information sources of health choices.	F2a, F4
Demonstrate the ability to apply a decision-making process to health issues and problems of diverse situations.	C1, C2, F2a
Demonstrate skills for building and maintaining positive relationships.	G4a
Identify age appropriate ways to express love and affection.	G1b, G4
How to: Explore introductory outdoor pursuits (e.g., backpacking, rock climbing, hiking, canoeing, cycling, ropes courses).	C1b
Combine skills competently to participate in modified versions of team and individual sports.	A2, C1b
Perform a variety of simple folk, country, and creative dances.	F4b
Use basic offensive and defensive strategies while playing a modified version of a sport.	C1b
Practice in ways that are appropriate for learning new skills or sports on his/her own.	F4
Correctly demonstrate various weight training techniques.	F4
Sustain an aerobic activity, maintaining a target heart rate to achieve cardiovascular benefits.	C3a
Improve and maintain appropriate body composition.	C3a
33. The exploration of individual interests, aptitudes, and abilities in relation to career development, including the establishment of educational, career, and other goals related to life roles	A2f
Self-Knowledge	
The relationship between personal behavior and self concept	F4
How to identify personal interests, aptitudes, abilities, strengths, and weaknesses	F4
How to express feelings, reactions, and ideas in an appropriate manner	G1b
How to use peer feedback	F1a
Appropriate interpersonal skills in expressing feelings and ideas	G1b
How to appreciate the similarities and differences among people	G3b
Educational and Occupational Exploration	
How to relate academic and technical knowledge and skills to personal interests	F4

Oregon

	NCEO CODE
Importance of personal skills and attitudes to career success	F4
Exploring various occupational groups	A2f
Influence of changes in supply and demand for workers in different careers	F4
How teaming with others enhances individual performance	G
Ways in which work can overcome social and economic problems	G
How to identify personal goals that may be satisfied through a combination of work, community, social, and family roles	D3e
Career Planning and Decision-Making	
How to identify alternatives in decision-making situations	F2a
Strategies for managing personal resources to make tentative career and educational goals	F
The stereotypes, biases, and discriminatory behaviors that impact opportunities in certain careers	no match
Effects of others on career planning	no match
34. The study of (a) family relationships including how families function to meet the needs of their numbers; and (b) human development across the life span with emphasis on child development, parenting education, and aging	F4
WORK IN PROGRESS	
35. The study of individuals and families as producers and consumers of goods and services	F4a
WORK IN PROGRESS	
36. The study of the relationship among individuals, families, and community environments in which they live, work, and contribute	F4a
WORK IN PROGRESS	

Pennsylvania

Document Utilized

Regulations of the State Board of Education, 22 Pa. Code Chapter 5 (July, 1993)

Background

In 1991, the state board of education called for Pennsylvania to develop outcomes for what students should know and be able to do. The state has articulated 53 outcomes in nine academic areas: arts and humanities, career education, citizenship, communications (reading and writing), environmental studies, home economics, mathematics, science and technology, and wellness and fitness. The 53 outcomes are grouped into four categories: primary, intermediate, middle, and high school. The outcomes are mandatory, but each district decides which grades fall into each category. The state intends to create voluntary content standards separate from the 53 outcomes.

Pennsylvania

	NCEO CODE
The Student learning outcomes describe the skills and abilities which students will be expected to demonstrate before graduating from a public school.	
1. High academic achievers.	F3d
2. Self-directed, lifelong learners.	D1, F
3. Responsible, involved citizens.	D, E
4. Collaborative, high-quality contributors to the economic and cultural life of their communities.	F
5. Adaptive users of advanced technologies.	F5a
6. Concerned steward of the global environment.	E1a
7. Healthy, continuously developing individuals.	C1
8. Caring, supportive family and community members.	A2e, D1a
1. **Self-worth** Public schools should help students develop capabilities, talents, self understanding and a feeling of self-worth and acknowledge students for effort and achievement.	G3a
2. **Information and thinking skills** Public schools should help students develop the skills necessary to locate and manage information, solve problems and make decisions, including the processes of analysis, synthesis, creativity and evaluation.	F2a
3. **Learning independently and collaboratively** Public schools should encourage students to become independent life-long learners and to collaborate with others in developing knowledge, skills and new ideas.	D1, G4b
4. **Adaptability to change** Public schools should prepare students to grow and develop in a world in which change is normal and constant.	no match
5. **Ethical judgement** Public schools should teach students the importance of making ethical judgements for the common good.	E
6. **Honesty, responsibility and tolerance** Public schools should convey to students the need for honesty, integrity, individual responsibility and tolerance.	D, G3
f. The quality school provides instruction throughout the curriculum so that each student may achieve the following academic goals:	
1. **Communications** Each student shall become proficient in reading, composition, listening, speech, understanding, interpreting, analyzing and synthesizing information.	F1a, F2a, F3b, F3c

Pennsylvania

	NCEO CODE
2. Mathematics Each student shall become proficient in the use of varied mathematical process and applications to solve challenging problems and to create new ways of understanding information	F2a, F3a
3. Science and Technology Each student shall become proficient in applying the processes of analysis, synthesis and evaluation to the solution of challenging scientific problems and in the application and understanding of technology in society.	F4a, F5a
4. Environment and Ecology Each student shall understand the environment and the student's ecological relationship with it in order to recognize the importance of the quality of life in a healthy and balanced environment.	F4a
5. Citizenship Each student shall understand local, State and United States history, geography, systems of government and economics and their relationship to the history, geography, systems of government and economics of other countries in the world and shall acquire and have opportunities to practice, in the school and in the community, the skills necessary for active participation in civic life.	A2e, F4a
6. Arts and Humanities Each student shall understand and appreciate the breadth of human accomplishment through the arts and humanities and shall have opportunities to practice creativity of thought and action and to demonstrate talent in the arts.	F4b
7. Career Education and Work Each student shall explore varied career options and develop the skills and work habits needed to be productive, contributing member of society and the understanding that lifelong learning is necessary to maintain those behaviors, skills and attitudes.	A2f
8. Wellness and Fitness Each student shall acquire and use the knowledge and skills necessary to promote individual and family health and wellness.	C1, C2, C3
9. Home Economics Each student shall understand and apply principles of money management, consumer behavior and child health to provide for personal and family needs.	F
§ 5.202. Student Learning Outcomes	
a. In designing educational programs, school districts shall provide for the attainment of the student learning outcomes under subsection (f) and any other student learning outcomes which they develop and describe in their strategic plans under § 5.203(c) (relating to strategic plans) as requirements for graduation from high school. Achieving the outcomes in this section requires students to demonstrate the acquisition and application of knowledge and appropriate actions. Achieving the outcomes does not require students to hold or express particular attitudes, values or beliefs.	no match
b. A school district's curriculum shall be designed to provide all students with focused learning opportunities needed to attain these outcomes.	no match
c. As required by § 5.203(c)(3), school districts shall develop outcomes to be attained by students at transition points from one organizational level to another and may develop outcomes to be attained at additional transition points. These transitional outcomes shall be designed to assure that students are making progress toward attainment of the outcomes needed to graduate from high school. The school district assessment plan under § 5.203(c)(5) shall include a description of how the transitional outcomes are measured by the district and how information from the school district assessments is used to assist students having difficulty meeting the transitional outcomes.	no match
d. School districts shall develop standard for assessing the attainment of the outcomes under subsection (f) and any other student learning outcomes which they develop and describe in their strategic plans under § 5.203(c) for purposes of high school graduation and strategies for assisting students to attain them.	no match

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	NCEO CODE
e. The student learning outcome in subsection (f) shall be attained by students in various ways and shall be assessed by school districts in various ways. Some will result from successful completion of a course; some from successful completion of a series of courses; some from independent study, community service or work experience; some from participation in extracurricular activities. Some students may meet some outcome expectations before they come to school. Exceptional students may meet outcome expectation by completion of their Individualized Education Programs under § 14.32 (relating to IEP). Some outcomes will be assessed by traditional test; some by other forms of assessment under § 5.232 (relating to school district assessment); some by teacher observation of student performance in school; some by attainment of IEP goals. Some students will need more instruction in some areas than other, and school districts are responsible for organizing programs to best accommodate the needs of their students.	no match
(f) School district shall prepare all students to attain the following student learning outcomes.	
1. Communications	
i. All students use effective research and information management skills, including location of primary and secondary sources of information with traditional and emerging library technologies.	F4, F5a
ii. All students read and use a variety of methods to make sense of various kinds of complex texts.	F3b
iii. All Students respond orally and in writing to information and ideas gained by reading narrative and informational texts and use the information and ideas to make decisions and solve problems.	F1a, F3c
iv. All students write for a variety of purposes, including to narrate, inform and persuade, in all subject areas.	F3c
v. All students analyze and make critical judgements about all forms of communication, separating fact from opinion, recognizing inconsistencies and judging the validity of evidence.	F1, F2a
vi. All students exchange information orally, including understanding and giving spoken instructions, asking and answering questions appropriately and promoting effective group communications.	F1a
vii. All students listen to and understand complex oral messages and identify their purpose, structure and use.	F1a
viii. All students compose and make oral presentations for each academic area of study that are designed to persuade, inform or describe.	F1a
2. Mathematics	
i. All students use numbers, number systems and equivalent forms (including numbers, words, objects and graphics) to represent theoretical and practical situations.	F3a
ii. All students compute, measure and estimate to solve theoretical and practical problems, suing appropriate tools, including modern technology such as calculators and computers.	F2a, F3a, F5a
iii. All students apply the concepts of patterns, functions and relations to solve theoretical and practical problems.	F2a, F3a
iv. All students formulate and solve problems and communicate the mathematical processes used and the reasons for using them.	F1a, F2a, F3a
v. all students understand and apply basic concepts of algebra, geometry , probability and statistics to solve theoretical and practical problems.	F2a, F3a
vi. All students evaluate, infer and draw appropriate conclusions from charts, tables and graphs, showing the relationships between data and real-world situations.	F2a, F3a
vii. All students make decisions and predictions based upon the collection, organization, analysis and interpretation of statistical data and the application of probability.	F2a, F3a
3. Science and Technology.	
i. All students explain how scientific principles of chemical, physical and biological	F4a

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		NCEO CODE
	phenomena have developed and relate them to real-world situations.	
ii.	All students demonstrate knowledge of basic concepts and principles of physical, chemical, biological and earth sciences.	F4a
iii.	All students use and master materials, tools and processes of major technologies which are applied in economic and civil life.	F4a, F5a
iv.	All students explain the relationships among science, technology and society.	F4a
v.	All students construct and evaluate scientific and technological systems using models to explain or predict results.	F4a
vi.	All students develop and apply skills of observation, data collection, analysis, pattern recognition, prediction and scientific reasoning in designing and conducting experiments and solving technological problems.	F2a, F4a
vii.	All students evaluate advantages, disadvantages and ethical implication associated with the impact of science and technology on current and future life.	F4a
viii.	All students evaluate the impact on current and future life of the development and use of varied energy forms, natural and synthetic materials, and production and processing of food and other agricultural products.	F4a
4.	**Environment and Ecology.**	
i.	All students understand and describe the components of ecological systems and their functions.	F4a
ii.	All students analyze the effects of social systems, behaviors and technologies on ecological systems and environmental issues.	F4a
iii.	All students think critically and generate potential solutions to environment issues.	F2a, F4a
iv.	All students evaluate the implications of finite natural resources and the need for conservation, sustainable agricultural development and stewardship of the environment.	F4a
5.	**Citizenship**	
i.	All students demonstrate an understanding of major events, cultures, groups and individual in the historical development of Pennsylvania, the United States and other nations, and describe themes and patterns of historical development.	F4a
ii.	All students demonstrate understanding of themes and patterns of geography, know the location of major bodies of water, land masses and nations, and describe the relationships between geography and historical, economic and cultural development.	F4a
iii.	All students describe the development and operations of economic, political, legal and governmental systems in the United States, assess their own relationships to those systems and compare them to those in other nations.	F4a
iv.	All students examine and evaluate problems facing citizens in their communities, State, nation and world by incorporating concepts and methods of inquiry of the various social sciences.	F4a
v.	All students develop and defend a position on current issues confronting the United States and other nations, conducting research, analyzing alternatives, organizing evidence and arguments, and making oral presentation.	F1a, F2a, F4a
vi.	All students explain basic economic concepts and the development and operation of economic systems in the United States and other nations, and make informed decisions about economic issues.	F4a
vii.	All students demonstrate their skills of communicating, negotiating and cooperating with others.	F1a, G4b
viii.	All students demonstrate that they can work effectively with others.	G4b
ix.	All students demonstrate and understanding of the history and nature of prejudice and relate their knowledge to current issues facing communities, the United States and other nations.	F4a
6.	**Arts and Humanities.**	
i.	All students describe the meanings they find in various works from the visual and performing arts and literature on the basis of aesthetic understanding of the art form.	F4b

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ii. All students evaluate and respond critically to works from the visual and performing arts and literature of various individuals and cultures, showing that they understand important features of the works.	F2a, F4b
iii. All students relate various works from the visual and performing arts and literature to the historical and cultural context within which they were created.	F4b
iv. All students produce, perform or exhibit their work in the visual arts, music, dance or theater, and describe the meanings their work has for them.	F4b
7. Career Education and Work.	
i. All students explore the multiple purposes of work and the range of career options, including entrepreneurship, and relate them to their individual interests, aptitudes, skills and values.	A2f
ii. All students assess how changes in society, technology, government and the economy affect individuals and their careers and require them to continue learning.	F
iii. All students understand and demonstrate the importance of relating their academic and vocational skills - for example, interviewing, creative thinking, decision making, problem-solving, understanding and giving written and oral instructions-to their ability to seek, obtain, maintain and change jobs.	A2f, F
iv. All students completing a vocational-technical education program exhibit the skills required to succeed in a particular occupation for which they have prepared.	F
8. Wellness and Fitness	
i. All students develop knowledge of injury prevention and treatment and the ability to respond appropriately in emergency situations.	C2a, C2c
ii. All students recognize and demonstrate the ability to apply dietary guidelines to meet nutritional needs at various stages of life.	C1a
iii. All students demonstrate their knowledge of benefits associated with physical fitness and good personal health habits including health promotion and disease prevention.	C1, C3a
iv. All students identify the advantages of avoiding, and develop the skills to avoid, tobacco, alcohol and substance use.	C2d
v. All students demonstrate individual development in motor fitness and physical fitness, including aerobic fitness and skills in lifetime sports and outdoor activities, to promote lifelong physical activity.	C1b, C3a
vi. All students demonstrate leadership skills and the ability to work cooperatively in team sports or other developmentally appropriate group activities.	G4b
9. Home Economics	
i. All students demonstrate their knowledge of principles of consumer behavior as a foundation for managing available resources to provide for personal and family needs.	D1a, F4
ii. All students demonstrate their knowledge of basic child health and child care skills.	F4

South Carolina

Documents Utilized

South Carolina Foreign Languages Framework (November, 1993)
South Carolina Visual and Performing Arts Framework (November ,1993)
South Carolina Mathematics Framework (November, 1993)

Note: Other frameworks still under development include science, English/language, arts, health and safety, social studies, and physical education.

Background

In November of 1993, the State Board of Education adopted the first three voluntary frameworks in foreign languages, visual and performing arts, and mathematics. The frameworks present essential components necessary for improving education by setting out broad, circular themes, topics, and objectives in multi-year blocks. It includes clear expectations for all students and programs. Each framework uses different benchmarks. For example, in math, the benchmarks begin with grades K-3. In foreign languages, performance objectives are articulated at the elementary, middle, and high school levels. The state is in the process of revising its achievement assessments and Graduation requirements to incorporate its standards for English, math, and science.

South Carolina

	NCEO CODE
DANCE EDUCATION	
COMPONENT ONE: AESTHETIC PERCEPTION--MULTISENSORY INTEGRATION/TECHNIQUE AND SKILLS	
Goals: To develop an awareness of the body as an instrument of expression.	F4b
To increase movement/dance vocabulary.	F4b
To promote functional and artistic use of the movement/dance elements: body, space, time, dynamics/effort.	F4b
Overview: Aesthetic perception encompasses the range of experiences from awareness and exploration of movement potential to the analysis, selection, and application of the Space, Time, Dynamics/Effort factors to create skilled and refined movement. These successful experiences are the foundation for a sensitive dance participant/observer and enhance self esteem.	
Objectives: Students will be able to:	
Demonstrate an understanding of the key elements of movement/dance vocabulary.	F4b
Demonstrate an increased skill level in the use of body in space, in time, and with dynamic fluency.	F4b
Demonstrate increasing levels of coordination, balance, stamina, elevation, and technique appropriate to age and development.	F4b
Demonstrate kinesthetic awareness of the body in motion and in stillness.	F4b
Demonstrate knowledge and use of anatomically and kinesiologically sound movement principles for safety, efficiency, and longevity as a dancer.	C2a, F4b
COMPONENT TWO: CREATIVE EXPRESSION--PROCESS AND PRODUCT	
Goals: To express ideas, feelings, and concepts in dance through the creative process.	F4b
To apply choreographic tools and composition principles in evaluating dance works of self and others.	F4b
Overview: Creative expression includes gaining skill in using the tools as the creator of dance, recognizing and experiencing the necessity and the joy of exploration and experimentation as prerequisite to composition, and the process of selecting the significant form, structure, and aesthetic factors as a part of refining the product.	

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Objectives: Communicate personal feelings and ideas through movement with originality, individual style, and clarity.	F4b
Experience the creative process in dance through experimentation, improvisation, selection and synthesis.	F4b
Use abstract concepts and environmental and sensory stimuli as sources for composing dances.	F4b
Select and organize movement motifs, phrases, and dance compositions for others in informal and performance settings.	F4b
Apply choreographic criteria to assess works in progress and finished pieces by self and others.	F4b
COMPONENT THREE: DANCE HERITAGE--HISTORICAL AND CULTURAL	
Goals: To acquire knowledge of the historical and cultural significance of dance and of the universality of the dance phenomenon, and to develop an awareness of the significance of dance for society.	F4b
Overview: Through participation in a variety of dance styles and through study of print and other visual media, students comprehend universal themes, cultural roots and differences in style, significance of dance in society, and the means for preservation of dance.	
Objectives: Understand that dance reflects, records, and shapes history and plays a role in every culture as a universal language.	F4b
Become aware that dance takes many forms, is a valid form of expression for males and females, and can present and communicate ides in many different ways.	F4b
Demonstrate cultural and historical similarities and differences among dance forms.	F4b
Demonstrate comprehension of a variety of dance styles and proficiency in executing more than one style.	F4b
Recognize the role of the dancer in society as an expressive artist, entertainer, and creator of artistic values and accomplishments of civilization.	F4b
Identify important dance innovators in past and contemporary cultures.	F4b
Identify careers related to dance in contemporary society.	A2f, F4b
COMPONENT FOUR: AESTHETIC VALUING	
Goals: To appreciate the art of dance as a communication form, both as the participant and the observer.	F4b
To value the choreographic process and the choreographic criteria, respectively.	F4b
To judge the quality of dance(s) by applying aesthetic principles and choreographic criteria.	F4b
To appreciate the relationship of the skill of the performer to the clarity of the performance.	F4b
To increase dance vocabulary and expressive language in discussing aesthetic valuing.	F4b
Overview: The distinctions between the participant and observer and the process and the product are stressed to keep in proper perspective the importance of the role and impact of each on making judgements of the worth of dance.	
Objectives: Recognize the power of dance as nonverbal communication and creative expression, both as observer and participant.	F4b
Appreciate the universality of dance and other art forms.	F4b
Recognize the traditional great works of dance and their aesthetic values as creative milestones.	F4b
Recognize the difference between the process and product.	F4b
Recognize the necessity for commitment to a project by dancers and creators.	F4b
Apply aesthetic principles and choreographic criteria to judge the quality of dance both as observer and internally as the creator/participant.	F4b
Recognize the relationship between the level of choreographic expertise and the aesthetic sophistication of the dance.	F4b
Make judgements about anatomical and performance factors basic to the technical and performance skill of the performer.	F4b

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Utilize accurate terminology when discussing the technical skill of the performer and aesthetic principles and their application to dance works.	F4b
Increase and use correct dance terminology and a variety of synonyms and reference points (historical/cultural) in the discussion of the aesthetics of dance.	F4b
Develop a vocabulary for dance criticisms related to the aesthetics of dance styles.	F4b
DRAMA EDUCATION	
COMPONENT ONE: AESTHETIC PERCEPTION	
Goal: To develop understanding and appreciation of theater concepts and the dramatic process.	F4b
Objectives: Develop internal and external resources within the theater process.	F4b
Understand dramatic concepts through artistic collaboration.	A2a, F4b
COMPONENT TWO: CREATIVE EXPRESSION	
Goal: To develop and expand communication skills, collaborative problem-solving, and modes for self expression through the drama process.	F1a, F2a, F4b, G4b
Objectives: Students will be able to	
Expand verbal and non-verbal communication for expressions.	F4b
Develop personal involvement and response through artistic collaboration.	F4b
Develop creative applications to interpret and express dramatic concepts.	F4b
COMPONENT THREE: THEATER HERITAGE--HISTORICAL AND CULTURAL	
Goal: To relate and understand the relevance, implications, and consequences of theatre to its social, cultural, and historical context.	F4b
Objectives: Understand the role of theatre in different cultures and how theatre reflects, records, and shapes the history of different cultures.	F4b
Become aware of and understand different dramatic and literary themes, genres, and theatre conventions among different cultures and time periods.	F4b
Appreciate different aesthetic values among individuals and cultures.	F4b
Understand how theatre imitates and exaggerates life, and understand similarities and differences between theatre and life.	F4b
COMPONENT FOUR: AESTHETIC VALUING	
Goal: To develop skills and information to form individual aesthetic judgements in the informal drama process and for formal theater presentations.	F2a, F4b
Objectives: Respond to the collaborative process with informed, responsible, and cooperative opinions and judgements.	F2a, F4b
Evaluate formal theater experiences with an understanding of dramatic concepts and theater conventions.	F4b
Utilize aesthetic judgements to develop, analyze, and improve all aspects of the drama process.	F2a, F4b
MUSIC EDUCATION	
COMPONENT ONE: AESTHETIC PERCEPTION--CONCEPT DEVELOPMENT	
Goals: To develop sensitivity to the expressive qualities of music.	F4b
To increase aural awareness.	F4b
To encourage musical responsiveness, involvement, and discrimination.	F4b
To promote understanding of the nature and structure of music.	F4b
Objectives: Demonstrate an understanding of how sound is produced and modified.	F4b
Demonstrate an understanding of the elements of music.	F4b
Demonstrate an understanding of the structure and form of music.	F4b
Demonstrate understanding that will lead to the effective use of written notation.	F4b

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COMPONENT TWO: CREATIVE EXPRESSION-SKILLS DEVELOPMENT	
Goals: To become sensitive to the expressive qualities of musical sounds.	F4b
To develop musical responsiveness, involvement, and discrimination.	F4b
To develop skills necessary to become capable and intelligent performers, creators, and consumers of music.	F4b
Objectives: Listen to music attentively and respond appropriately.	F4b
Perform music using a variety of sound sources.	F4b
Communicate musical ideas effectively through the use of notation.	F4b
Demonstrate ability to develop and communicate original musical ideas.	F4b
COMPONENT THREE: MUSICAL HERITAGE--HISTORICAL AND CULTURAL	
Goal: To develop awareness and demonstrate knowledge of the styles, idioms, performance media, and purposes of music that are part of our multicultural heritage.	F4b
Objectives: Identify and become familiar with their own musical heritage.	F4b
Identify some of the expressive elements in the music of different cultures and ethnic groups.	F4b
Describe some of the social and historical situations that have influenced the composition, style, selection, and performance of music.	F4b
COMPONENT FOUR: AESTHETIC VALUING--APPLICATION OF KNOWLEDGE AND SKILLS	
Goal: To provide a sound basis of musical experiences that can be used in making intelligent judgements of musical value.	F4b
Objectives: Demonstrate an understanding of the value and role of music in the lives of individuals and cultures.	F4b
Demonstrate an understanding of how the purpose and function of music in a particular situation have influenced compositions, selections, and performances.	F4b
Demonstrate an understanding of the ways that the elements of music have been combined to produce characteristic styles and forms.	F4b
VISUAL ARTS EDUCATION	
COMPONENT ONE: AESTHETIC PERCEPTION-VISUAL AND TACTILE	
Goal: To develop and expand aesthetic perception.	F4b
Objectives: Increase aesthetic awareness of visual and tactile qualities in works of art, nature, events, and objects within the total environment.	F4b
See the world directly and metaphorically perceiving the physical world in terms of visual and tactile qualities and symbols.	F4b
COMPONENT TWO: CREATIVE EXPRESSION--ARTISTIC KNOWLEDGE SKILLS	
Goal: To develop and expand visual arts knowledge and skills in order to express ideas creatively.	F4b
Objectives: Acquire artistic skills to express and communicate responses to experiences.	F4b
Recognize the importance of personal experiences and respect the originality in their own visual expressions and in the artwork of others.	F4b
Develop manipulative and organizational skills in using art media effectively to translate ideas, feelings, and concepts.	F4b
COMPONENT THREE: VISUAL ARTS HERITAGE--HISTORICAL AND CULTURAL	
Goal: To acquire knowledge of historical and cultural developments which occur as a result of varying needs and aesthetic points of view.	F4b

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Objectives: Study a variety of artworks and accomplishments of contemporary, historic, and prehistoric cultures.	F4b
Understand that art reflects, records, and shapes history and plays a role in every culture.	F4b
Gain an understanding of their creative abilities and their heritage within the context of a comprehensive world view.	F4b
Clarify their own aesthetic values and learn to appreciate differences in the aesthetic values of others.	F4b
COMPONENT FOUR: AESTHETIC VALUING--ANALYSIS, INTERPRETATION, AND JUDGEMENT	
Goal: To develop a base for making informed aesthetic judgements.	F4b
Objectives: Make informed responses to works of art, nature, and other objects within the total environment by using objective criteria for analysis, interpretation, and judgement.	F4b
Derive meaning and value form experiences by making and justifying judgements about aesthetic qualities in works of art and other objects within the total environment.	F4b
Use analysis, interpretation, and judgement about visual relationships based on learned aesthetic values to improve art production.	F2a, F4b
FOREIGN LANGUAGES FRAMEWORK	
PERFORMANCE OBJECTIVES	
MIDDLE SCHOOL	
Tasks in the middle school grades should be essentially the same as those in elementary school, but with age-appropriate activities and topics, increased use of authentic texts and more emphasis on reading and writing.	
LISTENING TASKS The student will be able to:	
1. understand the main idea of authentic listening texts such as weather reports, news items, etc.	F4a
2. relay a message from an announcement or phone call	F4a
SPEAKING TASKS The student will be able to:	
1. participate in and maintain conversations	F4a
2. give a more extended response to questions	F4a
3. describe familiar objects and people	F4a
READING TASKS The student will be able to:	
1. read letters, dialogues and other texts	F4a
2. read authentic ads and cartoons	F4a
3. sequence events	F4a
4. draw conclusions	F4a
5. answer questions	F4a
WRITING TASKS The student will be able to:	
1. write letters to friends and pen pals	F4a
2. write a brief autobiography	F4a
3. write original dialogue	F4a
CULTURAL TASKS The student will be able to:	
1. compare American customs, such as handshakes and embraces, to foreign customs	F4a
2. research and report on landmarks and historical figures	F4a
PERFORMANCE OBJECTIVES: LATIN	
MIDDLE SCHOOL TASKS	
The student will be able to:	
1. understand the main ideas of a listening passage of simple Latin[listening]	F4a

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2. respond to questions with simple, but complete sentences [speaking]	F4a
3. read and comprehend simple prose passages of Latin [reading]	F4a
4. compose syntactically correct simple Latin sentences [writing]	F4a
5. identify examples of classical architecture in the community (e.g., Doric, Ionic and Corinthian columns) [cultural]	F4a
In addition, the middle school student will develop an awareness of classical mythology and its influence on the modern world (e.g., brand names; astronomy: names of planets and stars; cultural customs: Cupid and Valentine's Day).	
MATHEMATICS FRAMEWORK	
APPENDIX A: STANDARDS	
K-12 MATHEMATICS CURRICULUM STANDARDS BY CONTENT STRANDS, GRADES 6-9	
STRAND: NUMBER AND NUMERATION SYSTEM	
Students will participate in problem-solving activities through group and individual investigations so that they can:	A2a, F2a, F3a, G4b
extend their development of number sense to include all real numbers;	F3a
develop and use order relations for real numbers;	F3a
understand, represent, and use real numbers in a variety of equivalent forms (integers, fractions, decimals, percents, exponentials, and scientific notation) in a variety of real world and mathematical problem situations;	F3a
understand and apply ratios, proportions, and percents in a wide variety of situations;	F3a
develop and apply number theory concepts (primes, composites, factors, and multiples) in a variety of real-world and mathematical problem situations; and	F3a
connect number and numeration systems with other aspects of mathematics and with other disciplines.	F3a
STRAND: NUMERICAL AND ALGEBRAIC CONCEPTS AND OPERATIONS	
Students will participate in problem-solving activities through group and individual investigations so that they can:	A2a, F2a, F3a, G4b
use models, patterns, and relationships to construct, explain, and analyze algorithms for operations on integers and explain how the operations relate to each other;	F3a
develop reasonable proficiency in operations on integers and rational numbers;	F2a, F3a
develop, analyze, and explain techniques for estimation;	F2a, F3a
develop, analyze, and explain procedures for solving problems involving proportions;	F2a, F3a
select and use appropriate methods for computing from among mental arithmetic, paper-and-pencil, calculator, or computer methods;	F3a
use mental computation, estimation, and calculators to solve problems, predict results, and evaluate reasonableness of results;	F2a, F3a, F5a
understand the concepts of variables, expressions, equations, and inequalities and gain confidence in thinking and communicating algebraically;	F3a, G2b
represent situations and number patterns with models, tables, graphs, verbal rules, and equations and make connections among these representations;	F3a
analyze tables and graphs to identify properties and relationships;	F2a, F3a
solve linear equations using concrete, informal, and formal methods;	F2a, F3a
investigate inequalities and non-linear equations informally; and	F3a
apply algebraic methods to solve a variety of real-world and mathematical problems.	F2a, F3a
STRAND: PATTERNS, RELATIONSHIPS, AND FUNCTIONS	
Students will participate in problem-solving activities through group and individual investigations so that they can:	A2a, F2a, F3a, G4b

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use technology along with concrete, numerical, and abstract models to explore, describe, analyzed, extend, and create a wide variety of patterns;	F2a, F3a, F5a
represent, discuss, and describe functional relationships with tables, graphs, and rules;	F3a
analyze and predict functional relationships and make generalizations based on observed patterns;	F2a, F3a
use models and technology to analyze functional relationships to explain how a change in one quantity results in a change in another quantity;	F3a, F5a
use variables, equations, and inequalities to express functional relationships;	F3a
make, test, and utilize generalizations about given information as a means of solving real world and mathematical problems; and	F2a, F3a
connect patterns, relationships, and functions with other aspects of mathematics and with other disciplines.	F3a
STRAND: GEOMETRY AND SPATIAL SENSE	
Students will participate in problem-solving activities through group and individual investigations so that they can:	A2a, F2a, F3a, G4b
model, identify, describe, classify, and compare two- and three-dimensional geometric figures;	F3a
use technology whenever appropriate to explore concepts and applications of geometry;	F3a, F5a
develop spatial sense by thinking about, constructing, an drawing two- and three-dimensional geometric figures;	F3a
investigate and predict the results of combining, partitioning, and changing shapes, figures, and models;	F3a
investigate the results of transformations, including translations, reflections, rotations, and glide reflections, to reinforce concepts such as congruence, similarity, parallelism, perpendicularity, and symmetry;	F3a
apply coordinate geometry properties and relationships to solve real-world and mathematical problems; and	F2a, F3a
connect geometry and spatial sense to the physical world, to other aspects of mathematics, and to other disciplines.	F3a
STRAND: MEASUREMENT	
Students will participate in problem-solving activities through group and individual investigations so that they can:	A2a, F2a, F3a, F4b
extend their understanding of the concepts and processes of length, capacity, weight (mass), perimeter, area, volume, time, temperature, and angle measure;	F3a
estimate, construct, and use measurements to describe and compare phenomena;	F3a
use suitable methods of approximations to find areas and volumes of irregular shapes;	F3a
understand the structure and use of nonstandard and standard (customary and metric) systems of measurement;	F3a
select and use appropriate tools and units to measure to the degree of accuracy required in a particular situation;	F3a
develop the concepts of rates and other derived and indirect measurements;	F3a
use concrete and graphic models to discover formulas for finding perimeter, area, and volume of common two- and three-dimensional shapes;	F3a
use measurements and formulas to solve real-world and mathematical problems; and	F3a
connect measurement to other aspects of mathematics and to other disciplines.	F3a
STRAND: PROBABILITY AND STATISTICS	
Students will participate in problem-solving activities through group and individual investigations so that they can:	A2a, F2a, F3a, G4b
model situations by carrying out experiments or simulations to determine probabilities, using technology whenever appropriate ;	F3a, F5a
model situations by constructing a sample space to determine probabilities, using technology whenever appropriate;	F3a, F5a

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	NCEO CODE
make inferences and convincing arguments based on an analysis of theoretical or experimental probability;	F3a
collect, organize, analyze, describe, and make predictions with data, using technology whenever appropriate;	F2a, F3a, F5a
construct, read, and interpret tables, graphs, charts, and other forms of displayed data;	F3a
evaluate arguments that are based on data analysis;	F2a, F3a
develop an appreciation for the pervasive use and misuse of probability and statistical analysis in the real world; and	F3a
connect probability and statistics with other aspects of mathematics and with other disciplines.	F3a

South Dakota

Document Utilized

South Dakota Mathematics and Science Benchmarks--draft (January ,1994)

Background

In 1991, South Dakota was awarded a grant from the National Science Foundation to develop mathematics and science standards. In October 1994, South Dakota received a grant from the Innovations in Education Fund from the U.S. Department of Education to create standards in the arts, civics, English, foreign languages, geography, and history. Math and science standards describe student learning for grades K-2, 3-4, 5-8, and 9-12. Standards in the other subjects will describe learning in grades 2, 4, 8, and 12. The standards are voluntary; currently no performance or assessment standards relate to the content standards, although the state has had a testing program in place since 1985. Education officials how to create tests to complement the content standards once they are more fully developed.

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	NCEO CODE
MATHEMATICS	
NUMBER SENSE Number sense is the ability to interpret and use numbers in counting and measurement situations and to sense the reasonableness of computational results. 5-8 NUMBER SENSE: BENCHMARKS All Students Will:	
1. represent different forms of numbers and their relationships.	F3a
2. create and model problems in respect to different forms of numbers.	F3a
3. demonstrate order relations in the real number system.	F3a
4. model relationships that transfer whole number operations to other forms of numbers.	F3a
5. utilize the real number system to demonstrate a problem solving strategy through an estimation, computation and proportion procedure.	F3a
6. communicate their thinking processes and justify the appropriateness of an approximation or an exact calculation.	F3a
7. verify the reasonableness of their results.	F3a
MEASUREMENT Measurement is a dimension, quantity, or capacity determined by comparison to a standard unit. The study of measurement shows useful and practical applications of mathematics. 5-8 MEASUREMENT: BENCHMARKS All Students Will:	
1. demonstrate competency in the use of both Standard, International and English units.	F3a
2. solve problems using the most appropriate system of measurement while determining the degree of accuracy needed.	F2a, F3a
3. relate measurement concepts to various occupational uses.	F3a
PATTERN RELATIONS Patterns, Relations and Functions: A pattern is an arrangement of objects or symbols in which relationships can be established. 5-8 PATTERN RELATIONS: BENCHMARKS All Students Will:	
1. represent patterns and functional relationships in different forms.	F3a
2. extend and analyze a wide variety of patterns.	F2a, F3a
3. communicate and model problems using patterns and functions.	F1a, F2a, F3a

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	NCEO CODE
STATISTICS	
Statistics and Probability: Statistics is a mathematical tool used to analyze data. Probability is the mathematics of chance.	
5-8 STATISTICS: BENCHMARKS	
All Students Will:	
1. collect and organize sets of meaningful data.	F3a
2. formulate convincing arguments based on their interpretations of the data.	F2a, F3a
3. communicate their conclusions based on their data analysis.	F1a, F3a
ALGEBRA	
Algebra is a language of symbols used to communicate concepts, relationships and abstract ideas.	
5-8 ALGEBRA: BENCHMARKS	
All Students Will:	
1. investigate and analyze the algebraic concepts of variable, expression, equation and inequalities.	F2a, F3a
2. analyze and model properties and interrelationships of algebraic concepts.	F2a, F3a
3. apply knowledge of algebraic concepts to a variety of problems.	F3a
GEOMETRY	
Geometry is a language used to communicate the properties of and relationships between objects. Spatial sense involves insights and intuition about two and three dimensional shapes and their characteristics, interrelationships of shape, and the effects of changes to shapes.	
5-8 GEOMETRY: BENCHMARKS	
All Students Will:	
1. develop spatial sense by utilizing/using geometric figures.	F3a
2. analyze properties of geometric figures.	F2a, F3a
3. apply transformations to geometric figures.	F3a
4. model applications of geometry.	F3a
SCIENCE	
NATURE OF SCIENCE	
The nature of science involves a systematic approach to problem solving through inquiry, observation, validation, experimentation, communication and collaboration.	
5-8 NATURE OF SCIENCE: BENCHMARKS	
All Students Will:	
1. accurately collect, record and communicate observations.	F1a, F4a
2. predict patterns based on data.	F4a
3. designs and conduct a controlled experiment to investigate a question.	F4a
4. communicate the design of a controlled experiment so that the investigation can be replicated	F4a
5. state conclusions based on research and investigation.	F4a
SYSTEMS	
A system is a group of related things and processes functioning as a unit for a defined purpose.	
5-8 SYSTEMS: BENCHMARKS	
All Students Will:	
1. communicate how the component parts of a system interact.	F1a, F4a
2. illustrate a model a system.	F4a
3. predict possible effects within a system as components are changed.	F4a
MODELS	
"A model of something is a simplified imitation that we can help us understand it better. A model may be a device, a plan, a drawing, an equation, a computer program, or even just a	

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mental image." (Science for All Americans, p. 157)	
5-8 MODELS: BENCHMARKS	
All Students Will:	
1. explain observations using symbolic as well as concrete models.	F4a
2. describe the limitations of using models.	F4a
3. relate the effects of change on a model to the effects of change on the real object/event.	F4a
4. predict changes (to an event) using a model.	F4a
PATTERNS OF CHANGE	
Patterns of change are variations that occur within models or systems. Consistency, defined as equilibrium, stability, or symmetry, is a concept imbedded within patterns of change.	
5-8 PATTERNS OF CHANGE: BENCHMARKS	
All Students Will:	
1. classify various patterns as steady, cyclic or irregular.	F4a
2. compare the patterns of change within a system or model as constancy is maintained.	F4a
3. make predictions based on patterns of change.	F4a
SOUTH DAKOTA INTEGRATED BENCHMARKS	
5-8 NATURE OF SCIENCE/NUMBER SENSE	
All students will verify the reasonableness of the results of controlled experiment based on numerical data collected.	F3a, F4a
5-8 NATURE OF SCIENCE/MEASUREMENT	
All students will solve problems and/or conduct investigation that require the appropriate selection and use of measurement systems.	F2a, F4a
5-8 NATURE OF SCIENCE/PATTERN RELATIONS	
All students will analyze pattern relationships established through the collecting, recording, and comparing of data during controlled experimentation.	F2a, F4a
5-8 NATURE OF SCIENCE/STATISTICS	
All students will communicate interpretation (s) of data collected during an experiment or investigation.	F1a, F3a, F4a
5-8 NATURE OF SCIENCE/ALGEBRA	
All students will develop an algebraic statement based on scientific investigation.	F3a, F4a
5-8 NATURE OF SCIENCE/GEOMETRY	
All students will design geometric transformations and communicate the design so that it can be replicated.	F1a, F3a
5-8 SYSTEMS/NUMBER SENSE	
All students will communicate how the component parts of a system interact using the properties of real numbers.	F1a, F3a
5-8 SYSTEMS/MEASUREMENTS	
All students will communicate quantitatively how the component parts of a system interact.	F1, F4a
5-8 SYSTEMS/PATTERN RELATIONS	
All students will model a system using a variety of patterns.	F4a
5-8 SYSTEMS/STATISTICS	
All students will predict possible effects within a system using probability.	F3a
5-8 SYSTEMS/ALGEBRA	
All students will investigate and analyze a system using algebraic concepts.	F2a, F3a
5-8 SYSTEMS/GEOMETRY	
All students will analyze properties of a system using geometric figures.	F2a, F3a
5-8 MODELS NUMBER SENSE	
All students will communicate the reasonableness of results when relating the effects of change on a model to the effects of change on the real object/event.	F1a, F3a
5-8 MODELS/MEASUREMENT	
All students will relate how a scale model is used to solve problems.	F2a, F3a

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	NCEO CODE
5-8 MODELS/PATTERN RELATIONS All students will extend and analyze a wide variety of patterns using models.	F2a, F3a
5-8 MODELS/STATISTICS All students will predict changes using data collected from a model or models.	F3a
5-8 MODELS/ALGEBRA All students will investigate and analyze changes that occur within a model using algebraic concepts.	F2a, F3a
5-8 MODELS/GEOMETRY All students will analyze concrete models using geometric properties and spatial relationships.	F2a, F3a
5-8 PATTERNS OF CHANGE/NUMBER SENSE All students will verify the reasonableness of prediction which were based on patterns of change.	F3a
5-8 PATTERNS OF CHANGE/MEASUREMENT All students will classify patterns of change through measurable attributes.	F3a
5-8 PATTERNS OF CHANGE/PATTERN RELATIONS All students will communicate predictions based on patterns of change.	F1a, F4a
5-8 PATTERNS OF CHANGE/STATISTICS All students will predict patterns of change based on statistical evidence.	F1a, F3a
5-8 PATTERNS OF CHANGE/ALGEBRA All students will apply knowledge of algebraic concepts to make predictions comparing patterns of change.	F2a, F3a
5-8 PATTERNS OF CHANGE/GEOMETRY All students will analyze complex systems as they apply to the solution of occupation related problems.	F2a, F3a

Utah

Documents Utilized

Elementary Core Curriculum Standards, Levels K-3 (1991)
Elementary Core Curriculum Standards, Levels 4-6 (1991)

Background

In 1989, legislative leaders determined that the state need to develop content standards for students. In 1991, the work of 11 action teams was presented to the state board of education and legislature. The teams articulated a state core curriculum and methods of assessment. Standards have been developed for the arts, language arts, mathematics, reading, science, and social studies in each grade from K-12. The state core is mandatory for districts, but the assessment standards are voluntary.

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		NCEO CODE
INFORMATION TECHNOLOGY		
2070-01	The students will use each component of a computer (technology) system correctly.	F5a
2070-02	The students will demonstrate proper keyboarding techniques.	F5a
01	Increase keyboarding speed by five words a minute while maintaining accuracy and proper technique.	F5a
02	Identify and demonstrate use of number keys.	F5a
2070-03	The students will understand the major social and ethical issues in the field of information technology.	F4a
01	Demonstrate appropriate conduct during technology work periods.	D, F5a
02	Predict possible future uses of microchip processors.	F4a
03	Identify careers that use technology with the intent of exploring possible career choices	A2f
04	Discuss the social implications of current technology issues (e.g., privacy, information retrieval, copyright, access, ownership, public domain, licensing, viruses, etc.).	F4a
2070-04	The students will use application software to accomplish a variety of tasks.	F5a
01	Use a word processor to produce documents in content areas.	F5a
02	Demonstrate the proper terminology associated with databases and spreadsheets (e.g., field/category, records, files, cells, columns, rows, alphabetic/labels, numeric, formulas, etc.)	F5a
03	Describe the differences between alphabetic and numeric fields in a database.	F5a
04	Create and save a database.	F5a
05	Produce three different reports using the same database.	F5a
06	Create and save a spreadsheet.	F5a
07	Integrate data from/to a word processor, spreadsheet, and/or database.	F5a
08	Use a graphics program to create a graphic.	F5a
09	Integrate a graphic into a word processor, database, and/or spreadsheet.	F5a
10	Use a modem to access a telecommunications service.	F5a
11	Identify and/or use emerging technologies.	F5a
2070-05	The students will use technology to develop problem-solving skills.	F2a, F5a
01	Use appropriate grade level simulation and problem-solving software.	F2a, F5a
02	Relate computer use to real-life, problem-solving situations at the level of the student's understanding.	F2a, F5a
03	Identify the tasks where information technology can perform better than people (e.g., dangerous or repetitive tasks and manipulation of data).	F4a
04	Create a short program to solve a problem in a content area.	F5a

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		NCEO CODE
LIBRARY MEDIA		
4080-01-3	The students will find, use, and analyze information from the library media center and other locations about a famous contemporary person (listening, speaking, reading, critical thinking, pre-writing).	F2a, F4
01-3	Choose a famous, contemporary person.	F4
02-3	Read an encyclopedia article for a brief overview of the person's life, habits, education, etc.	F4
03-3	Formulate questions to explore the topic.	F4
04-3	Determine search terms or key words to locate additional information.	F4
05-3	Locate materials by using indexing systems (print or electronic) such as library media catalogs, magazine indexes, newspaper indexes, Current Biography, etc.	F4
06-3	Find relevant, current, and accurate information from various sources that answers predetermined questions, using at least one magazine.	F4
07-3	Differentiate between fact and opinion in each source.	F4
08-3	Evaluate information.	F4
09-3	Synthesize information from selected sources.	F4
10-3	Define unfamiliar words.	F4
11-3	Determine an appropriate audience.	F4
12-3	Use prewriting strategies (e.g., outlining, brainstorming, listing, clustering, mapping, etc.).	F3b
4080-02-03	The students will create a project/biographical sketch of a famous, contemporary person (listening, speaking, reading, critical thinking, writing, responding, revising).	F3b, F4
01-3	Produce a comprehensive, factual, and informative project/paper (e.g., brochure, encyclopedia article, magazine article, newscast, editorial script, obituary, etc.).	F4
02-3	Capture accurately the contribution of the person.	F4
03-3	Use appropriate voice.	F4
04-3	Synthesize and organize information.	F4
05-3	Use new words correctly.	F3b, F4
06-3	Prepare a simple biography.	F3a, F4a
	While revising, the students will:	
07-3	Participate in response groups for peer evaluation.	A2a, G4b
08-3	Analyze and clarify the paper to improve its meaning and communication.	F3c
09-3	Make necessary structural, syntactical, and graphic changes for improvement.	F3c
4080-03-3	The students will produce a final draft of a project/biographical sketch of a famous, contemporary person (listening, speaking ,reading, writing, critical thinking, editing, publishing).	
01-3	Correct fragments and run-ons.	F3c
02-3	Use adjectives and adverbs correctly.	F3c
03-3	Use the proper form of pronouns.	F3c
04-3	Use correct subject-verb agreement.	F3c
05-3	Create and punctuate more sophisticated sentences. Use sentence combining techniques where applicable.	F3c
06-3	Use specific words and details.	F3c
07-3	Eliminate slang and jargon.	F3c
08-3	Define unfamiliar terms for the audience.	F3c
09-3	Correct misplaced phrases and clauses.	F3c
10-3	Punctuate the final draft correctly.	F3c
11-3	Paragraph the final draft appropriately.	F3c
12-3	Use transitions between paragraphs.	F3c
13-3	Use correct capitalization.	F3c

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		NCLO CODE
14-3	Use standard spelling.	F3c
15-3	Eliminate inconsistencies in tense.	F3c
16-3	Correct faulty parallelism.	F3c
17-3	Eliminate redundancies.	F3c
18-3	Share the final draft.	F3c
VISUAL ARTS		
1100-01	The students will develop skills vital to making art by composing pictures and rendering structure, value, scale, shapes, gesture, texture, depth, and color in a picture (Participant)	F4b
01	Begin a drawing using simple shapes or gestural line for "blocking in ."	F4b
02	Render the scale and proportion of objects (i.e., one object to another or parts to a whole).	F4b
03	Create a more effective use of space by cropping (extending objects beyond the picture plane).	F4b
04	Render variations of lightness and darkness in a drawing.	F4b
05	Use structural lines to define changes in planes or surfaces (i.e., corners, edges, wrinkles, or folds).	F4b
06	Use lines, dots, and shapes to create the illusion of texture.	F4b
07	Create the illusion of depth by using the following:	F4b
	a. Overlapping	F4b
	b. Size	F4b
	c. Placement	F4b
	d. Contrast	F4b
	e. Detail	F4b
08	Use linear perspective to create the illusion of depth.	F4b
09	Render an object in the path of light with a light side, a shadow side, and cast shadow.	F4b
1100-02	The students will develop observation skills vital to looking at discussing aesthetic form by describing the use of repetition and emphasis in works of art, by telling how elements are used to create unity, and by relating colors in a composition (Observer/Listener).	F4b
01	Explain how repetition and overlapping can unify a composition.	F4b
02	Demonstrate and understanding of:	F4b
	a. Color organization (color wheels)	F4b
	b. Color schemes	F4b
	c. Tints, shades, and tones.	F4b
	d. Warm and cool colors	F4b
03	Create harmonious color relationships for specific effects (i.e., happy, dignified, peaceful, chaotic, and tragic).	F4b
04	Use contrast to create emphasis (focal point) in a composition.	F4b
1100-03	The students will study events leading to the development of the modern era of art history and develop skills vital to analyzing and evaluating works of art (Critic).	F4b
01	Identify three events that led to the development of the modern era of art history. This may include a global understanding of four major periods in art history (i.e., Ancient, Middle Ages, Renaissance, and Modern).	F4b
02	Develop skills necessary to critique works of art by:	F4b
	a. Describing what you see and how elements such as line, shape, color, and texture are used.	F4b
	b. Explaining how principles such as emphasis, repetition, and contrast affect composition.	F4b
	c. Interpreting the feelings, mood, or idea communicated in the work.	F4b
	d. Explaining why a work is considered a success, according to what you have learned in art.	F4b

Utah

		NCEO CODE
	CERAMICS	
1110-01	The students will develop skills vital to making art by demonstrating proper procedures for forming, drying, decorating, and preparing clay (Participant).	F4b
01	Knead ceramic clay so that it has an even consistency without air bubbles and with a correct moisture content.	F4b
02	Join clay parts by such methods as adding water, using slip, or scoring surfaces.	F4b
03	Form ceramic clay by:	F4b
	a. Pinch method	F4b
	b. Slab method	F4b
	c. Coil method	F4b
04	Dry clay objects slowly and evenly.	F4b
05	Decorate a clay surface by:	F4b
	a. Applying a glaze	F4b
	b. Creating textural effects and patterns	F4b
06	Recycle unfired clay.	F4b
07	Create forms which have unity and continuity from any view.	F4b
1110-02	The students will develop observation skills vital to looking at and discussing aesthetic form by describing ways in which artists use elements and principles of composition aesthetically, by creating pleasing relationships between function and form and positive and negative space, and by using a ceramic vocabulary (Observer/Listener).	F4b
01	Discuss the use of emphasis on three-dimensional objects.	F4b
02	Discuss ways in which unity is achieved in three-dimensional objects.	F4b
03	Discuss both the positive and negative space in decorating or creating a three-dimensional form.	F4b
04	Tell how artists create a pleasing relationship between the size and shape of objects with scale and proportion.	F4b
05	Discuss the relationship between function and form.	F4b
06	Tell how stains or glazes may be used harmoniously.	F4b
07	Tell how the elements of a form relate parts of a composition to each other (i.e., relationships between colors, textures, or shapes.)	F4b
08	Identify the parts of a pot (i.e., base, foot, neck, lip, mouth, shoulder, body [belly]).	F4b
09	Define basic ceramic terms:	F4b
	stoneware, porcelain, glossy glaze, bisque, scoring, bone-dry, kiln, wedging, potter's wheel, dry foot, earthenware, matte glaze, semi-matte glaze, greenware, leather hard, slip, bat, firing, ceramic clay, kiln furniture	F4b
10	List the steps involved in forming a clay object: (1) knead clay, (2) form clay, (3) dry clay, (4) bisque fire, (5) glaze or decorate, (6) glaze fire.	F4b
1110-03	The students will develop skills vital to analyzing and evaluating works of art and studying the artists who produced them by describing how artists use repetition and balance in ceramics, and by identifying cultures and professions related to ceramics. (Critic)	F4b
01	The students will develop skills vital to analyzing and evaluating works of art and studying the artists who produced them by describing how artists use repetition and balance in ceramics and by identifying cultures and professions related to ceramics. (Critic)	F4b
01	Tell how potters use the principle of repetition when decorating a surface.	F4b
02	Tell how potter artists have created both formal and informal balance in their forms.	F4b
03	Describe ways in which decoration has enhanced a ceramic form.	F4b
04	Identify examples of pottery from the following cultures: Mediterranean, Oriental, European, and North and South American Indians.	F4b

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		NCEO CODE
05	Discuss the role of ceramics in today's culture (i.e., arts and crafts, science, and industry)	F4b
	JEWELRY	
1120-01	The students will develop skills vital to making art by creating a design for an article of jewelry, by selecting a method of construction, and by completing the steps required in fashioning jewelry (Participant).	F4b
01	Create original designs in which unity and continuity are considered.	F4b
02	Determine the suitability of the materials selected for the design.	F4b
03	Determine the appropriateness of the form for the function of the design (e.g., sharp points are not appropriate for a ring, or an earring must not be too heavy).	F4b
04	Complete the rough finishing of a design.	F4b
05	Finish the design by polishing and buffing it with appropriate compounds or techniques.	F4b
06	Select one of the following areas of emphasis and create an article of jewelry:	F4b
	a. Lost wax casting	F4b
	b. Sand casting, cuttle bone, or similar forms	F4b
	c. Wood jewelry	F4b
	d Fabricated jewelry	F4b
1120-02	The students will develop observation skills vital to looking at and discussing aesthetic form by telling how jewelry designers have used principles of art to enhance the aesthetic quality of their design and by describing the use of positive and negative space relationships in jewelry (Observer/Listener).	F4b
01	Use visual examples and tell how jewelry designers:	F4b
	a. Create a point of emphasis on a three-dimensional object.	F4b
	b. Create a feeling of unity.	F4b
	c. Use both positive and negative space in decorating forms.	F4b
	d. Use scale and proportion to create pleasing relationships between parts of a form.	F4b
	e. Relate the elements of a form to each other (i.e., the relationship between textures, colors, or shapes.	F4b
02	Define basic jewelry terms:	F4b
	polish/buff, cast, funnel	F4b
	flux, lost wax casting, cuttle bone	
	mold, centrifugal casting, chase	
	lapidary, sprue, solder	
1120-03	The students will develop skills vital to analyzing and evaluating works of art and studying the artists who produced them by discussing the use of repetition, balance, and decoration in jewelry design; and by identifying cultures famous for their fine jewelry (Critic).	F4b
01	Tell how the principle of repetition is used by jewelers when decorating a surface.	F4b
02	Tell how jewelry designers create both formal and informal balance in a design.	F4b
03	Describe how decoration can enhance a form.	F4b
04	Explain the role of jewelers in today's culture (i.e., mass produced and hand-crafted forms).	F4b
05	Identify the important role of jewelry in several specific cultures (i.e., Egyptian, Mayan, African, and English).	F4b
	GENERAL CRAFTS	
1130-01	The students will develop skills vital to making art by creating craft forms and by following the steps required in each (Participant).	F4b
01	Create a craft form from wood (i.e., plaques, containers, and signs).	F4b
	a. Identify the limits of wood as a material and how it affects its design potential.	F4b
	b. Use the forming process appropriate for the objects selected.	F4b
	c. Finish the wood by sanding, staining, or varnishing.	F4b

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		NCEO CODE
02	Create a craft form with fibers or fabrics.	F4b
	Use the processes involved in one or more art forms:	F4b
	stitchery / tie-dyeing / soft sculpture	F4b
	weaving / appliqué / basketry	
	macramé / batik / basketry	
03	**Paper craft:** Use processes such as cutting, folding, supporting, tearing, scoring, gluing, decorating (where appropriate), pasting, bending, or forming.	F4b
04	**Glass design:** Use processes such as cutting, etching, joining, and staining.	F4b
05	**Mosaic:** Use processes such as cutting and grouting.	F4b
06	**Tile Murals:** Use processes such as wax resistant, painting, firing, and mounting.	F4b
07	**Mask Making:** Use materials such as papier-mâché, plastic, and latex.	F4b
08	**Metal Design:** Use processes such as engraving, embossing, staining, and chasing.	F4b
1130-02	The students will develop observation skills vital to looking at and discussing aesthetic form by describing ways in which artists have used emphasis, unity, and proportion in their craft designs, by describing the role of space, function, and decoration in design and by defining basic craft terms (Observer/Listener).	F4b
01	Identify ways in which craftsmen create a point of emphasis on a three-dimensional object.	F4b
02	Point out ways in which craftsmen create a feeling of unity in a design.	F4b
03	Tell how artists use both positive and negative space in decorating or creating a three-dimensional form.	F4b
04	Describe how artists use scale and proportion in a design.	F4b
05	Identify ways in which craftsmen relate form and function in an object.	F4b
06	Tell how texture or pattern is used to enhance a craft object.	F4b
07	Point out ways in which color is used effectively in a craft form.	F4b
08	Tell how craftsmen effectively relate the elements of their design (i.e., texture, shape, and color).	F4b
09	Define basic craft terms:	F4b
	carve / macramé / scoring	F4b
	additive / appliqué / hooking	
	subtractive / weaving / batik	
	sand casting / stitchery / etching (glass)	
	knotting / dyeing / soldering	
1130-03	The students will develop skills vital to analyzing and evaluating works of art and studying the artists who produced them by discussing ways in which craftsmen use principles of design, and by identifying cultures famous for their crafts. (Critic)	F4b
01	Analyze the effective use of both formal and informal balance in a craft design.	F4b
02	Look at a series of craft forms and determine whether or not decoration enhances each object.	F4b
03	Discuss the role and characteristics of crafts from the following cultures: Egyptian, African, Oriental, European, and North and South American.	F4b
04	Discuss the contributions of craft design and craftsmen in industry, art, and science.	F4b
1140-01	The students will develop skills vital to making art by creating sculptural forms, both additive and subtractive, and by following the appropriate steps in creating sculpture (Participant).	F4b
01	Create sculpture by the additive method, preferably using ceramic clay.	F4b
	a. Create an original design or marquette.	F4b
	b. Construct an appropriate armature and/or base (if needed).	F4b
	c. Create the sculptural form.	F4b
	d. Enhance the surface by texturing, burnishing, etc.	F4b
	e. After firing, select and apply an appropriate patina, stain, or paint to further enrich	F4b

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		NCEO CODE
	the surface of the sculpture (if clay is used).	
02	Create sculpture by the subtractive method (i.e., using plaster with vermiculite or soapstone).	F4b
	a. Create an original design or select an appropriate model.	F4b
	b. Carve, scoop, cut, file, or chisel out the sculptured form.	F4b
	c. Finish the surface by sanding, texturing, etc.	F4b
1140-02	The students will develop observation skills vital to looking at and discussing aesthetic form by telling how sculptors have used basic elements and color harmony in their designs, giving attention to special relationships in sculpture and defining basic sculpture terms (Observer/Listener).	F4b
01	Tell how sculptors have used emphasis in their work.	F4b
02	Point out examples of unity and continuity in pictures of famous sculpture.	F4b
03	Describe how a sculptor has used both positive and negative space in decorating or creating a three-dimensional form.	F4b
04	Tell how a sculptor used scale and proportion.	F4b
05	Point out ways in which a sculptor relates parts of a composition appropriately (i.e., with texture, line, and repetition).	F4b
06	Define the following terms:	F4b
	stain, armature, oil base clay, water base clay, bisque, bone dry, welding, leather hard, scoring, glaze, patina, marquette, vermiculite, luting	
1140-03	The students will develop skills for analyzing and evaluating works of art and studying the artists who produced them by naming three famous sculptors and identifying their work; by describing the role of repetition, surface enrichment, and balance in good sculpture design; and by discussing basic characteristics of sculpture from various cultures and applications of the sculptor's skills (Critic).	F4b
01	Explain ways in which noted sculptors have used the principle of repetition.	F4b
02	Point out the use of both formal and informal balance in sculpture.	F4b
03	Explain how surface enrichment can enhance a form.	F4b
04	Identify the use of positive and negative space in sculpture.	F4b
05	Identify characteristics of sculpture from the following cultures: Mediterranean, Oriental, Egyptian, American, and African.	F4b
06	Identify professions which might use skills similar to the sculptors.	F4b
07	Describe the historical importance of at least three famous sculptors representing one from the past and one from the present.	F4b
	ART HISTORY AND CRITICISM	
1150-01	The students will develop skills vital to appreciating and discussing the role they may play in viewing art forms, distinguish between the various art forms and explaining ways in which people value art (Participant)	F4b
01	Describe the differences in the role of observer, participant, and critic as each relates to the visual arts.	F4b
02	Identify the relationship between natural objects, folk art (objects made by people untrained in art), popular art (magazines, billboards, movies), practical art (architecture and interior design, etc.), and expressive art.	F4b
03	Describe how the following experiences affect how a person values art:	F4b
	a. The setting in which art is viewed.	F4b
	b. How a person has learned to "see."	F4b
	c. How much is known about the elements and principles of design.	F4b
	d. What is known about symbolism in art.	F4b
	e. What the art work reminds one of.	F4b

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		NCEO CODE
	f. How much is known about the history of the work.	F4b
1150-02	The students will develop observation skills vital to looking at and discussing aesthetic form by identifying ways in which elements of design have been used by artists and by describing techniques artists use to create moods or feelings in their work (Observer/Listener).	F4b
01	Look at works of art and identify how the artist:	F4b
	a. Used emphasis in the work.	F4b
	b. Created movement through repetition.	F4b
	c. Created movement through overlapping.	F4b
	d. Created balance.	F4b
	e. Used elements to give unity.	F4b
	f. Created a mood or feeling with color.	F4b
	g. Used all of the space effectively.	F4b
	h. Maintained aesthetic proportions.	F4b
	i. Created a balance between simplicity and detail.	F4b
	j. Manipulated the feeling of "flatness" to achieve a certain purpose.	F4b
02	Classify sculpture under the headings "relief" and "in-the-round."	F4b
1150-03	The students will develop skills for analyzing and evaluating works of art and studying the artists who produced them by using nontechnical methods to describe works of art to tell how they were created; by identifying themes, styles, symbols, and techniques used by artists; and by identifying common art terms and major periods of art history (Critic).	F4b
02	Explain ways in which the environment influenced the design of buildings in major cultures around the world.	F4b
03	Distinguish between paintings, drawings, photographs, and prints of similar subjects (categorizing).	F4b
03	Explain how an artist's work is a form of nonverbal communication.	F4b
04	Describe differences among works of art by identifying subject matter, color usage, feelings or mood, and what is seen in the work (i.e., what is happening).	F4b
05	Identify similarities and differences in the style of various well-known artists.	F4b
06	Point out examples of experimentation, imagination, and creativity in works of art.	F4b
07	Point out examples of artists creating a mood or feeling by "keying" the color or value of objects in an art product.	F4b
08	Point out the use of themes in works of art and similarities and differences in the way the themes are treated.	F4b
09	Identify examples of symbolism used in art and describe logical interpretations of their usage.	F4b
10	Describe examples of stylized and representational works of art.	F4b
11	Tell how the function and the materials of a form influence its structure, shape, or appearance.	F4b
12	Describe examples of the five major uses of art:	F4b
	a. Philosophy or religion	F4b
	b. Utility	F4b
	c. Documentation or decoration	F4b
	d. Self-expression	F4b
13	Describe art forms in terms like realistic or abstract, geometric or organic, figurative, natural, still life, cityscape, landscape, and nonobjective.	F4b
14	Identify special techniques used by artists in painting, sculpture, and printmaking (i.e., gouache, graffito, resist, and scumbling).	F4b
15	Participate in the process of looking at and talking about works of art and the cultures that produced them. This would include discussing the artists and his culture; the tools the artist used; the mood, feeling, or message of the work; the effects of elements and principles of design evident in the work; and the styles or techniques used.	F4b

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		NCEO CODE
16	Identify the case and effect relationship of one period on another (or one culture on another [i.e., Neo-Classic on Impressionism, African art on Cubism]).	F4b
17	Describe the characteristics of six major art periods and identify a major artist representing each.	F4b
	PHOTOGRAPHY	
1160-01	The students will develop skills vital to taking and processing photographs by developing basic camera mastery and essential skills and theory for darkroom work (Participant).	F4b
01	Explain the functions of the various parts of a camera: body, viewer, lens, shutter, aperture setting.	F4b
02	Explain how to use lens, aperture, adjustment, and shutter speed for the following situations:	F4b
	a. To photograph subjects in various stages of action.	F4b
	b. To control the depth of field.	F4b
	c. To compensate for restricted light conditions (i.e., when fast action must be photographed under low-light conditions or when a shallow depth of field is required under extreme light conditions).	F4b
03	Explain the effect light has upon photographic film and paper.	F4b
04	Describe the sequence of chemicals through which photographic film and paper must be taken in the development process.	F4b
05	Describe ways to control areas where light strikes the photographic paper (e.g., by dodging, burning, and by the use of negatives, masks, and opaque objects).	F4b
06	Describe ways to control the chemical reaction of photographic paper through such processes as chemical dodging.	F4b
07	Explain the appropriate use of natural and artificial light in photography.	F4b
08	Develop black and white film.	F4b
09	Make contact prints of the negatives on photographic paper.	F4b
10	Use the enlarger's film carrier, aperture setting ,time, lens, and height adjustment to produce an enlargement of a negative.	F4b
11	Select appropriate paper according to the characteristics of the negative and light source.	F4b
1160-02	The students will develop observation skills vital to looking at and discussing aesthetic form by describing well-designed photographs and defining basic terms (Observer/Listener).	F4b
01	Describe how the point of emphasis (or focal point) in a photograph was created.	F4b
02	Point out how a photographer creates interesting negative spaces.	F4b
03	Point out how photographers create harmony or unity in a composition.	F4b
04	Tell how photographers create both formal and informal balance in a design.	F4b
05	Tell how a photographer groups the elements of a design to make it more interesting.	F4b
06	Point out how a photographer manipulates contrast in a negative to create moods or feelings in a photograph.	F4b
07	Point out how a photographer creates a pleasing relationship between the size and shapes of objects in a photograph.	F4b
08	Tell how cropping is used to improve the composition of a photograph.	F4b
09	Describe how a photographer manipulates depth by controlling depth of field, focus, and contrast.	F4b
10	Define the following photographic terms:	
	aperture, lens, chemical dodging, masking, depth of field, developer, fixer, hypo clear, shutter speed, cropping, light dodging, burning, f/stop, hypo, wetting agent, silver salts	F4b

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		NCEO CODE
1160-03	The students will develop skills vital to analyzing and evaluating works of art and studying the artists who produced them by discussing photography from the view of an art critic, by identifying related careers, and by identifying well-known photographers (Critic).	F4b
01	Analyze ways in which photographers use various elements to relate parts of a composition to each other (e.g., by overlapping parts or repeating a color or texture).	F4b
02	Describe ways in which a photographer might use repetition to lead the eye in a predetermined direction, creating illusions of rhythm and movement.	F4b
03	Identify ways in which a photographer creates pattern to attract attention or provide areas of interest to make a better composition.	F4b
04	Tell how photographers use overlapping in a picture to improve their composition.	F4b
05	Discuss the role of photography in business, industry, and art.	F4b
06	Compare the work of two famous photographers such as Ansel Adams, Mathew Brady, W. Eugene Smith, Edward Steichen, Margaret Bourke White, Irving Pen, and Henri Cartier-Bresson.	F4b
MUSIC		
	GENERAL MUSIC	
1600-01	The students will reinforce and expand vocal techniques and skills related to singing, including a major scale and three-part songs (Participant).	F4b
01	Produce an acceptable vocal tone by using proper posture, breath support, and diction.	F4b
02	Recognize when the voice is in tune with other voices.	F4b
03	Sing a major scale.	F4b
04	Sing unison, two-part, and three-part songs.	F4b
05	Sing with expression using proper dynamics, tempo, and style.	F4b
06	Understand and show tolerance for the changing voice.	F4b, G3a
1600-02	The students will develop and reinforce techniques and skills related to playing musical instruments, including accompanying songs (Participant).	F4b
01	Play instruments such as the ukulele, guitar, autoharp, recorder, and percussion instruments, and use them to accompany songs.	F4b
1600-03	The students will identify musical instruments, voices, and historical periods; understand musical forms; and expand conducting skills (Observer/Listener, Critic).	F4b
01	Identify band, orchestra, and electronic instruments by sight and sound, recognize the characteristic qualities of the soprano, alto, tenor, and bass voices.	F4b
02	Identify the Baroque, Classical, Romantic, and Contemporary periods of music.	F4b
03	Recognize and conduct two-beat, three-beat, and four-beat patterns.	F4b
04	Identify the following musical forms: two part (AB), three-part (ABA, ABC), rondo (ABACAD, etc.), theme and variations, and fugue.	F4b
1600-04	The students will sight-read simple and rhythmic patterns and melodies using simple notes and rests (Participant, Observer/Listener, Critic).	F4b
01	Interpret musical symbols, terms, and signs as used in class.	F4b
02	Read melodies using letter names, numbers, and/or syllables.	F4b
03	Sight-read simple rhythmic patterns in single-pitch exercises and melodies using whole notes, half notes, quarter notes, eighth notes, and corresponding rests in quarter note time signatures.	F4b
1600-05	The students will develop skills necessary to create and notate a musical composition (Participant).	F4b
01	Demonstrate a knowledge of the rules of correct notation.	F4b
02	Write a major scale.	F4b
03	Create and notate a simple melody.	F4b

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		NCEO CODE
1600-06	The students will learn to evaluate musical experiences by demonstrating appropriate behavior and by verbalizing ideas and feelings that music can communicate (Observer/Listener, Critic).	F4b
01	Describe why certain musical experiences and activities may be preferred to others.	F4b
02	Describe ways various types of music have influenced society and how society has influenced music (e.g., jazz, rock, folk, country-western, and classical).	F4b
03	Demonstrate responsibility as a musician by:	D, F4b
	a. Coming prepared to class.	A2a, F4b
	b. Caring for music department physical facilities and equipment.	E1a, F4b
	c. Reacting appropriately to various music activities.	D1a, F4b
04	Describe the contributions of composers, performers, technicians, craftsmen, and others in developing and promoting music.	F4b
05	Describe the different ideas and feelings that music can communicate.	F4b
	BEGINNING CHORUS	
1620-01	The students will reinforce and expand knowledge, techniques, and skills involved in singing, including the vocal mechanism, major and chromatic scales, and the relationship of the individual voice to he entire ensemble (Participant).	F4b
01	Produce an acceptable vocal tone by using proper posture, breath support, and diction.	F4b
02	Match pitches, sing intervals and melodic lines in tune.	F4b
03	Understand the vocal mechanism and its function.	F4b
04	Produce a gradual extension of range with increasing facility and flexibility.	F4b
05	Understand the relationship of individual voices to the rest of the ensemble (e.g., balance, blend, and timbre).	F4b
06	Sing a major scale and a chromatic scale.	F4b
07	Sing with expression using proper dynamics, tempo, and style.	F4b
08	Sing unison, two-part, and three-part songs.	F4b
09	Understand and show tolerance for the changing voice.	F4b, G3a
10	Sing in a small ensemble.	F4b
1620-02	The students will identify performance problems and historical backgrounds, understand musical forms, and expand conducting skills (Observer/Listener, Critic).	F4b
01	Analyze performance problems and take appropriate measures to resolve them.	F4b
02	Identify the historical background of music being studied.	F4b
03	Recognize and conduct two-beat, three-beat, and four-beat patterns.	F4b
04	Identify the following musical forms: two part (AB), three-part (ABA, ABC), rondo (ABACAD, etc.), theme and variations, and fugue.	F4b
1620-03	The students will sight-read simple rhythmic patterns and melodies using simple notes and rests (Participant, Observer/Listener, Critic).	F4b
01	Interpret symbols, terms, and signs used in choral literature.	F4b
02	Sight-read simple rhythmic patterns in single-pitch exercises and melodies using whole notes, half notes, quarter notes, eighth notes, and corresponding rests in quarter note time signatures.	F4b
1620-04	The students will develop skills necessary to create and notate a musical composition (Participant).	F4b
01	Demonstrate a knowledge of the rules of correct notation.	F4b
02	Write a major scale and a chromatic scale.	F4b
03	Create and notate a simple melody.	F4b
1620-05	The students will learn to evaluate musical experiences by demonstrating appropriate behavior and by verbalizing ideas and feelings that music can communicate (Observer/Listener, Critic).	F4b

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		NCEO CODE
01	Describe why certain musical experiences and activities may be preferred to others.	F4b
02	Describe ways various types of music have influenced society and how society has influenced music (e.g., jazz, rock, folk, country-western, and classical).	F4b
03	Demonstrate responsibility as a musician by:	D, F4b
	a. Coming prepared to class	A2a, F4b
	b. Caring for music department physical facilities and equipment.	E, F4b
	c. Reacting appropriately to various music activities.	D1a, F4b
04	Describe the contributions of composers, performers, technicians, craftsmen, and others in developing and promoting music.	F4b
05	Describe the different ideas and feelings that music can communicate.	F4b
	BEGINNING BAND	
1640-01	The students will develop and reinforce techniques and skills related to playing a musical instrument, including playing position, tone production, scales, rudiments, and expression (Participant).	F4b
01	Identify the parts of the instrument.	F4b
02	Demonstrate proper embouchure for wind instruments or stick-grip for percussion instruments.	F4b
03	Demonstrate appropriate posture and hand position for playing the instrument.	F4b
04	Demonstrate proper breath support for wind instruments.	F4b
05	Produce an acceptable tone.	F4b
06	Articulate legato and staccato on wind instruments.	F4b
07	Play the following snare drum rudiments: single-stroke-roll, long-roll, flam, and ruff (percussionists).	F4b
08	Play the following major scales: one octave (concert pitch), F, B flat, E flat, A flat. All percussionists will play scales on mallet instruments.	F4b
09	Perform dynamic levels from piano through forte.	F4b
1640-02	The students will identify intonation problems, musical elements, understand musical forms, and expand conducting skills (Observer/Listener, Critic).	F4b
01	Recognize and correct intonation problems at the unison.	F4b
02	Recognize and conduct two-beat, three-beat, and four-beat patterns.	F4b
03	Identify the following musical forms: two part (AB), three-part (ABA, ABC), rondo (ABACAD, etc.), theme and variations, and fugue.	F4b
04	Identify the meter, mood, style, tempo, form, and dynamics of the music being studied.	F4b
1640-03	The students will sight-read simple rhythmic patterns and melodies using simple notes and rests (Participant, Listener/Observer, Critic).	F4b
01	Interpret the musical symbols, terms, and signs as found in first-year method books.	F4b
02	Sight-read simple rhythmic patterns in single-pitch exercises and melodies using whole notes, half notes, quarter notes, eighth notes, and corresponding rests in quarter note time signatures.	F4b
1640-04	The students will develop skills necessary to create and notate a musical composition (Participant).	F4b
01	Demonstrate a knowledge of the rules of correct notation.	F4b
02	Write the following scales, including key signatures: F, B^b, E^b, and A^b major.	F4b
03	Create and notate a simple melody.	F4b
1640-05	The students will learn to evaluate musical experiences by demonstrating appropriate behavior and by verbalizing ideas and feelings that music can communicate (Observer/Listener, Critic).	F4b
01	Describe why certain musical experiences and activities may be preferred to others.	F4b
02	Describe ways various types of music have influenced society and how society has influenced music (e.g., jazz, rock, folk, country-western, and classical).	F4b

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		NCEO CODE
03	Demonstrate responsibility as a musician by:	D, F4b
	a. Bringing appropriate musical instruments and/or equipment to class.	A2a, F4b
	b. Caring for music department physical facilities and equipment.	D, F4b
	c. Coming prepared to class.	A2a, F4b
	d. Reacting appropriately to various music activities.	D1a, F4b
04	Describe the contributions of composers, performers, technicians, craftsmen, and others in developing and promoting music.	F4b
05	Describe the different ideas and feelings that music can communicate.	F4b
	BEGINNING ORCHESTRA	
1660-01	The students will develop and reinforce techniques and skills related to playing a string instrument, including playing position, tone production, and expression (Participant).	F4b
01	Identify the parts of the instrument and bow.	F4b
02	Demonstrate the correct playing position for the body, instrument, and bow.	F4b
03	Play with clear tone quality.	F4b
04	Play the following bowing techniques:	F4b
	a. Detach (smooth, separate bows) using half bows and introducing the use of whole bows.	F4b
	b. Staccato (short strokes) using half bows.	F4b
	c. Legato (slurring) using two or three notes per bow.	F4b
05	Play the basic finger patterns for half-steps and whole-steps used in major and minor tetrachords (four-note scales).	F4b
06	Play the finger patterns for the following one octave major scales:	F4b
	a. Violin (D, G, A)	F4b
	b. Viola and cello (D, G, C)	F4b
	c. Bass (D, G)	F4b
07	Play dynamic levels from piano through forte.	F4b
08	Play pizzicato.	F4b
1660-02	The students will identify intonation problems, musical elements, historical backgrounds, understand musical forms, and expand conducting skills (Observer/Listener, Critic).	F4b
01	Recognize and correct intonation problems.	F4b
02	Pluck a string and tune it to a given pitch.	F4b
03	Identify the following musical forms: two part (AB), three-part (ABA, ABC), rondo (ABACAD, etc.), theme and variations, and fugue.	F4b
04	Identify the meter, mood, style, tempo, form, and dynamics of the music being studied.	F4b
05	Recognize and conduct two-beat, three-beat, and four-beat patterns.	F4b
1660-03	The students will sight-read simple rhythmic patterns and melodies using simple notes and rests (Participant, Observer/Listener, Critic).	F4b
01	Interpret musical symbols, terms, and signs as found in beginning method books.	F4b
02	Sight-read simple rhythmic patterns in single-pitch exercises and melodies using whole notes, half notes, quarter notes, eighth notes, and corresponding rests in quarter note time signatures.	F4b
1660-04	The students will develop skills necessary to create and notate a musical composition (Participant).	F4b
01	Demonstrate a knowledge of the rules of correct notation.	F4b
02	Write the following scales, including key signatures: C, D, and G major.	F4b
03	Create and notate a simple melody.	F4b
1660-05	The students will learn to evaluate musical experiences by demonstrating appropriate behavior and by verbalizing ideas and feelings that music can communicate (Observer/Listener, Critic).	F4b

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		NCEO CODE
01	Describe why certain musical experiences and activities may be preferred to others.	F4b
02	Describe ways various types of music have influenced society and how society has influenced music (e.g., jazz, rock, folk, country-western, and classical).	F4b
03	Demonstrate responsibility as a musician by:	D, F4b
	a. Bringing appropriate musical instruments and/or equipment to class.	A2a, F4b
	b. Caring for music department physical facilities and equipment.	D, F4b
	c. Coming prepared to class.	A2a, F4b
	d. Reacting appropriately to various music activities.	D1a, F4b
04	Describe the contributions of composers, performers, technicians, craftsmen, and others in developing and promoting music.	F4b
05	Describe the different ideas and feelings that music can communicate.	F4b
UTAH STUDIES		
6100-01	The students will demonstrate the ability to think critically, through speaking, listening, writing, and reading.	F1a, F2a, F3b, F3c
01	Use analogies in speech and writing.	F1a, F3c
02	Distinguish between relevant and irrelevant information in determining solutions to problems.	F2a
03	Predict outcomes and analyze causal factors.	F2a
04	Make logical conclusions through speaking and writing.	F1a, F2a, F3c
05	Construct a timeline.	F4
06	Demonstrate note-taking skills.	F4
07	Use primary sources (i.e., oral history, manuscripts, on-site investigations, journals, and newspapers) in studying state and local history.	F4a
08	Examine their own values and compare them to the values of various majority, minority, ethnic, and cultural groups in the community.	F4a
6100-02	The students will explain that the history of Utah represents its cultural heritage and that the various people and cultures of all historical periods have made contributions to Utah.	F4a
01	List the contributions of the major Native American groups to Utah's development (307-201, 202, 203).	F4a
02	List the contributions of the early Spanish explorers to Utah (Escalante, Dominguez, Cardenas, and Rivera) (307-501).	F4a
03	Analyze contributions made to Utah's history by the mountain men (Jedediah Smith, Peter S. Ogden, Etienne Provost, William Ashley, Jim Bridger, Joseph R. Walker, James Beckworth, and Antoine Robidoux) (307-502).	F4a
04	List the purposes and contributions made by government explorers such as Fremont, Gunnison, Stansbury, Powell, and Beckwirth (307-503).	F4a
05	Discuss the influence of the Mormon society and culture on the development of Utah, excluding doctrinal teaching of the Mormon religion (307-504).	F4a
06	Explain contributions of religious, ethnic, and cultural groups to the development of the state (307-504).	F4a
07	Demonstrate an awareness of the contributions of the military, industry, and mining to the development of the state (307-505, 6).	F4a
08	Evaluate our cultural heritage through examining architecture, journals, manuscripts, photography, the arts, and folklore of Utah (307-507).	F4a
09	Describe the contributions of women to Utah's development (307-303).	F4a
10	Identify critical, growth-related issues facing Utah in the future (i.e., water, heat, power, taxes, education, jobs, recreation, transportation, etc.) and suggest ways they can assure that Utah will continue to be a favorable place to live (Project 2000) (307-707, 8, 9, 10, 11).	F4a
6100-03	The students will identify the major geographic features of Utah.	F4a
01	Locate on a map of Utah the three physiographic provinces (Colorado Plateau, Rocky	F4a

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	Mountains, and Great Basin) (307-401).	
02	Locate on a map of Utah the following major rivers: Colorado, Green, Bear, San Juan, Virgin, Sevier, Provo, Weber, Jordan, and Paria (307-402).	F4a
03	Locate on a map of Utah the following major mountain ranges: Wasatch, Uintah, Oquirrh, LaSal, and Henry (307-403).	F4a
04	Locate on a map of Utah the following major bodies of water: Great Salt Lake, Utah Lake, Bear Lake, Lake Powell, Flaming Gorge, Sevier Lake, and the Strawberry Reservoir (307-404).	F4a
05	Label rainfall, resources, population, and vegetation on a map of Utah.	F4a
06	Locate on a map of Utah the state's counties and major cities.	F4a
6100-04	The students will discuss the similarities and differences of Utah's government to the federal government.	F4a
01	Describe the structure and services of local government in Utah (307-701).	F4a
02	Describe the structure and function of Utah's state government to include the executive, legislative, and judicial branches (307-702).	F4a
03	Compare the structure of the federal government with those of state and local governments in Utah (307-703).	F4a
04	Demonstrate how a citizen can effectively participate in government at the state and federal levels (307-704).	F4a
05	Identify the major elements of the Utah Constitution and explain how it functions (307-705, 6).	F4a
6100-05	The students will verbally explain how economic decisions, whether by individuals (microeconomics) or groups (macroeconomics), affect the economy of Utah.	F4a
01	Explain how an individual choice affects the economy of a geographic area.	F4a
02	Explain how group decisions affect the economy of a geographic area.	F4a
03	Explain the effects of geography, natural resources, supply of capital, government decisions, and technology on our economic decision making in the state of Utah (307-601, 2, 3).	F4a
04	Explain the relationship of the economic resources of the state of Utah (i.e., land, capital, labor, entrepreneurship).	F4a
05	Describe the interaction and opportunity cost of one economic decision on another (i.e., urban growth, conservation, nuclear storage, environmental protection).	F4a
06	Cite examples of productivity, work ethic, and specialization of labor that made the state of Utah successful.	F4a
07	Cite examples from Utah history of a traditional economy, planned economy, and market economy.	F4a
	UNITED STATES HISTORY	
6120-01	The students will demonstrate the ability to utilize critical thinking and decision-making skills in completing social studies activities.	F2a, F4a
01	Identify their own values and compare them to basic American values.	F4a
02	State or write possible solutions to an issue/problem.	F2a, F4a
03	Critically examine and compare current and historical events from various sources (media center, notes, television, radio, newspapers, interviews, etc.).	F4a
04	Apply law-related and citizenship/character education concepts to events that occurred in United States history.	F4a
05	Analyze graphs, charts, tables, diagrams, time lines, and cartoons.	F4a
6120-02	The students will evaluate how the American heritage reflects diverse cultures.	F4a
01	Describe the role of Native Americans in U. S. history.	F4a
02	Analyze the various cultures prevalent in the United States.	F4a
03	Identify the major contributions of religious and ethnic groups to the development of the country (308-301).	F4a

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04	Analyze the changing role of women in United States history.	F4a
6120-03	The students will evaluate why the events and acts in American history reflect the development of the beliefs and attitudes of the people of the United States.	F4a
01	Analyze the major historical, social, economic, religious, and political factors responsible for European exploration of North America (308-502).	F4a
02	Analyze the discoveries and impact of European explorers to the New World (308-503).	F4a
03	Compare the social, economic, religious, and political motivations influencing American colonization to 20th century immigration (308-504).	F4a
04	Relate the origin of American ideals, the concepts of liberty, and freedom to present day applications (308-506).	F4a
05	Explain how the constitution is the basis for today's legal system.	F4a
06	Evaluate the causes and outcomes of various wars involving the United States (308-511)	F4a
07	Evaluate how westward expansion brought both progress and problems for the United States (308-512).	F4a
08	Describe the social, political, and economic differences between the North and the South before the Civil War (308-513).	F4a
09	Explain the evolution of the Civil Rights movement (316-511).	F4a
10	Analyze the industrial and technological development in the United States and discuss their effects on transportation, communication, business, and labor.	F4a
11	Describe the impact on American life that various historical figures have made.	F4a
12	Describe how the United States has changed since World War II.	F4a
13	Trace the relationships of the United States with other leading worlds powers (316-518).	F4a
6120-04	The students will identify the major geographic features of the United States.	F4a
01	Locate the great plains, major rivers and bodies of water, and mountain ranges in the United States (308-402).	F4a
02	Locate the bordering countries, oceans, and natural resources of the United States (308-402).	F4a
6120-05	The students will describe how economic decisions, experiences, and technology changed America from an agricultural economy to an industrial economy.	F4a
01	Define economic terms (i.e., scarcity, opportunity cost, demand, supply, market price, etc.) in an agricultural, preindustrial, and industrial economy (316-603).	F4a
02	Describe how the government's economic policy changed and affected business operations, personal liberty, and the free enterprise system from an agricultural economy to an industrial economy (316-601).	F4a
03	Identify examples of productivity, work ethic, and benefits in the American economic system as it changed from an agricultural economy to an industrial economy.	F4a
04	Identify examples of the economic cycles (prosperity/recession) through the history of the United States (308-601, 2).	F4a
05	Cite examples of America's involvement in international trade.	F4a
06	Critically examine economic information from various sources (i.e., media center, radio, television, interviews, charts, graphs, cartoons, etc.).	F4a
6120-06	The students will evaluate why our democratic government was established to provide for the general welfare of its citizens.	F4a
01	Evaluate the principles expressed in the Declaration of Independence (i.e., equality, natural rights, and responsibility of government, civil disobedience, etc.) (308-701).	F4a
02	Identify the major elements of the United States Constitution (e.g., Preamble, Articles, and Amendments) and apply them to current issues (308-706, 7).	F4a
03	Explain how our legal system has been greatly affected by the rights and restraints of the Bill of Rights (308-708, 9).	F4a
04	Identify the purpose and role of government in a constitutional republic (308-710).	F4a
05	Discuss the basic constitutional principles in Amendments 11 through 26.	F4a

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MATHEMATICS		NCEO CODE
5080-01	The students will demonstrate knowledge of the properties of the real number system.	F3a
01	Know that for every real number there is a point on the number line which corresponds to it (108-005).	F3a
02	Know that rational numbers are either terminating or repeating decimals.	F3a
03	Know that non-terminating, non-repeating decimals are irrational numbers (108-003).	F3a
04	Know that a real number is a rational or an irrational number (108-004).	F3a
5080-02	The students will demonstrate knowledge of the real number system.	F3a
01	Perform the operations of +, -, x, and - on rational numbers.	F3a
02	Show that those exponents which are positive integers indicate how many times another number (the base) is being used as a repeated factor.	F3a
03	Evaluate expressions using the order of operations and grouping symbols.	F3a
04	Know that the square root of a whole number is either a whole number or an irrational number (108-007).	F3a
05	Know that the square root of a given number is that number which when multiplied by itself yields the given number (108-006).	F3a
06	Know that the square root of a negative number is undefined for the set of real numbers (108-008).	F3a
5080-03	The students will demonstrate knowledge of measurement.	F3a
01	Perform conversions between units of measure within the metric system.	F3a
02	Perform conversions between units of measure within the U.S. Common System.	F3a
03	Approximate conversions between units of measure in the metric system and the U. S. Common System. (1 liter is about 1 quart; 1 meter is about 1 yard)	F3a
04	Compute the volume of a rectangular prism, given a formula (108-015).	F3a
5080-04	The students will demonstrate ability to solve applied problems using the real number system.	F3a
01	Solve applied problems with real numbers.	F2a, F3a
02	Calculate the arithmetic mean, median, and mode for a given set of data (108-021).	F3a
5080-05	The students will demonstrate knowledge of geometry.	F3a
01	Know that a regular polygon is a polygon with equal sides and equal angles (108-009).	F3a
02	Know that in congruent polygons, corresponding sides are congruent and corresponding angles are congruent (108-010).	F3a
03	Know that the Pythagorean Theorem (property) states that in a right triangle whose legs are lengths A and B, and whose hypotenuse is length C, then $C^2 = A^2 + B^2$ (108-012).	F3a
04	Know that volume is the measure of the interior region of a three-dimensional figure (108-014).	F3a
05	Use formulas in computation of volume and surface area of simple three-dimensional figures (108-015).	F3a
5080-06	The students will demonstrate knowledge of mathematical sentences.	F3a
01	Know that an equivalent relation is obtained if the same number is added to or subtracted from both sides of the relation (108-016).	F3a
02	Know that an equivalent relation is obtained if both members of an equation are multiplied by the same number or divided by the same number (divisor not zero) (108-017).	F3a
03	Solve equations involving ratio and proportion.	F2a, F3a
04	Solve simple equations using more than one property of equality.	F2a, F3a
05	Write, translate, and solve equations from simple word problems.	F2a, F3a
5080-07	The students will demonstrate an understanding of the structure of the Cartesian	F3a

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	(coordinate) plane.	
01	Know that the axes of the rectangular coordinate system separates the plane into quadrants.	F3a
02	Graph ordered pairs of integers on the Cartesian (coordinate) plane in all quadrants (108-019).	F3a
03	Derive a table of ordered pairs from an equation of the form X + Y = K, where K is constant (108-018).	F3a
04	Graph linear equations of the form Y = X + K on a rectangular coordinate system (Cartesian plane) (108-020).	F3a
	ALGEBRA PREPARATION	
5200-01	The students will demonstrate a knowledge of set terminology and perform basic set operations.	F3a
01	Describe a set (116-301).	F3a
02	Classify sets as finite or infinite (116-302).	F3a
03	Recognize all subsets of any given set (116-305).	F3a
04	Define empty set (null set) (116-306).	F3a
05	Find the union of sets (116-307).	F3a
06	Find the intersection of sets (116-308).	F3a
07	Define disjoint sets.	F3a
5200-02	The students will demonstrate knowledge of the properties, structure, and vocabulary of the rational numbers and ability to perform the basic operations on real numbers.	F3a
01	Define factoring (116-314).	F3a
02	Define natural numbers (116-312).	F3a
03	Partition natural numbers into primes, composites, and the number one.	F3a
04	Find the prime factorization of a natural number; understand prime factorization is unique (116-315).	F3a
05	Determine the greatest common factor (GCF) of two natural numbers (116-318).	F3a
06	Determine the least common multiple (LCM) of two natural numbers (116-319).	F3a
07	Define relatively prime.	F3a
08	Define whole numbers (116-320).	F3a
09	Identify the additive identity element (116-321).	F3a
10	Know that if any product is the number zero, then at least one of the factors must be the number zero (116-331).	F3a
11	Define integers (116-322).	F3a
12	Determine the sum and difference of integers (116-323).	F3a
13	Determine the product and quotient of integers (116-324).	F3a
14	Know that the sum of every integer and its additive inverse is the number zero (116-325)	F3a
15	Define divisibility (116-326).	F3a
16	Define rational numbers (116-332).	F3a
17	Classify rational numbers as either a repeating decimal or a terminating decimal (116-333).	F3a
18	Know that the operations of addition and multiplication are commutative with respect to the rational numbers (116-327).	F3a
19	Know that the operations of addition and multiplication are associative with respect to the rational numbers (116-334).	F3a
20	Know that multiplication is distributive over addition with respect to the rational numbers (116-328).	F3a
21	Define the multiplicative identity element (116-329).	F3a
22	Define the multiplicative inverse (reciprocal) (116-339).	F3a
23	Perform the operations of addition, subtraction, multiplication, and division on rational numbers.	F3a
24	Express a fraction in decimal form (116-333).	F3a
25	Define the trichotomy principle (a = b, ab, or ab).	F3a

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26	Know that for every real number there is a one-to-one correspondence to a point on the number line.	F3a
27	Know that a non-terminating, non-repeating decimal is an irrational number (116-335).	F3a
28	Know that a real number is a rational or an irrational number (116-336).	F3a
29	Perform the operations of addition, subtraction, multiplication, and division on the real numbers.	F3a
30	Evaluate expressions using the order of operations and grouping symbols.	F3a
5200-03	The students will demonstrate knowledge of open sentences and the ability to solve simple linear equalities.	F3a
01	Define a variable (116-340).	F3a
02	Know that a mathematical sentence is either true or false or open (116-341).	F3a
03	Compare the rational numbers using the following symbols: $=, \neq, <, >, \leq, \geq$ (116-353).	F3a
04	Define a solution (or root) for a mathematical sentence (116-350).	F3a
05	Determine a solution set for a mathematical sentence from a given replacement set.	F3a
06	Know that there is exactly one point on the number line corresponding to any given rational number (116-383).	F3a
07	Know that on a horizontal number line a given number is greater than any number located to the left of that given number (116-384).	F3a
08	Find equivalent equations by adding, subtracting, multiplying, and dividing the same rational number relative to both members of an equation (116-343, 344).	F3a
5200-04	The students will demonstrate knowledge of exponents and radicals.	F3a
01	Write a number in exponential form (116-374).	F3a
02	Know that the natural number exponent tells how many times the base is used as a factor (116-375).	F3a
03	Know that the square root of a given number is that number which multiplied by itself yields the given number (116-379).	F3a
04	Know that the square root of a negative number is undefined for the set of real numbers (116-380).	F3a
5200-05	The students will demonstrate knowledge of ratio, proportion, and percent.	F3a
01	Define and use a ratio (116-370).	F3a
02	Define a proportion and use proportions to solve problems (116-371).	F3a
03	Define percent as a rational number. Know that percent is the ratio of a number compared to 100 (116-372).	F3a
04	Solve simple problems involving percent.	F3a
5200-06	The students will demonstrate knowledge of simple plane geometry.	F3a
01	Define perimeter, circumference, area, radius, and diameter.	F3a
02	Name and classify triangles, quadrilaterals, and circles.	F3a
03	Find perimeter and area of triangles, quadrilaterals, and circles.	F3a
04	Use formulas to compute the perimeters and areas of triangles.	F3a
05	Know that the axes of a rectangular coordinate system separate the plane into quadrants.	F3a
06	Graph a set of ordered pairs.	F3a
07	Know that a regular polygon is a polygon with equal sides and equal angles.	F3a
08	Know that in congruent polygons, corresponding sides are congruent and corresponding angles are congruent.	F3a
09	Know that the Pythagorean Theorem (property) states that in a right triangle whose legs are lengths A and B, and whose hypotenuse is length C, then $C^2 = A^2 + B^2$.	F3a
10	Know that volume is the measure of the interior region of a three-dimensional figure.	F3a
11	Use formulas in the computation of surface area and volume of three-dimensional figures.	F3a

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5200-07	The students will demonstrate knowledge of measurement.	F3a
01	Know that measurement is the comparison of things to standard units.	F3a
02	Measure length, volume, mass, temperature, and time (24-hour clock) using the metric system.	F3a
03	Measure length, volume, weight, temperature, and time using the U.S. Common System.	F3a
04	Perform conversions between units of measure within the metric system.	F3a
05	Perform conversions between units of measure within the U.S. Common System.	F3a
06	Approximate conversions between units of measure in the metric system and the U.S. Common System. (1 liter is about 1 quart; 1 meter is about 1 yard)	F3a
5200-08	The students will demonstrate knowledge of graphing on the rectangular coordinate system.	F3a
01	Derive a table for ordered pairs from an equation of the form X + Y = K, where K is constant.	F3a
02	Graph a set of ordered pairs.	F3a
03	Graph linear equations of the form Y = X + K, where K is constant.	F3a
5200-09	The students will select three objectives from this course and apply each of these objectives in a job or work setting.	F3a
01	Describe how each of three selected objectives is applied or used in a job or work setting	F3a
02	Select a job or work setting and show how the mathematics of this course has changed the manner in which work has been done in that job or setting.	F3a
03	Solve a problem applied to a job or work setting for each of three objectives from this course.	F2a, F3a
	ELEMENTARY ALGEBRA	
5250-01	The students will demonstrate knowledge of the properties of equalities.	F3a
01	Know that for any "a," then a = a, (reflexive property of equality) (116-411).	F3a
02	Know that for any "a" and "b," if a = b then b = a (symmetric property of equality) (116-412).	F3a
03	Know that for any "a," "b," and "c" if a = b and b = c, then a = c (transitive property of equality) (116-413).	F3a
04	Know that multiplication is distributive over addition and subtraction in the set of real numbers (116-420).	F3a
05	Know that zero is the additive identity for the set of real numbers (116-421).	F3a
06	Know that the number one is the multiplicative identity for the set of real numbers (116-422).	F3a
07	Know that the sum of a real number and its additive inverse (opposite) is zero (116-423).	F3a
08	Know that zero is its own additive inverse in the set of real numbers (116-424).	F3a
09	Know that the product of a non-zero real number and its multiplicative inverse (reciprocal) is the number one (116-425).	F3a
10	Know that zero does not have a multiplicative inverse (116-426).	F3a
11	Know that the product of real numbers is zero if and only if at least one of its factors is zero.	F3a
12	Define absolute value.	F3a
13	Define prime number.	F3a
14	Define composite number (116-429).	F3a
15	Define relatively prime (116-432).	F3a
16	Know that every natural number, except the number one, has a unique prime factorization (116-433).	F3a
17	Find the least common multiple (LCM) of two or more given natural numbers (116-430).	F3a
18	Find the greatest common factor (GCF) of two or more given natural numbers (16-431).	F3a
19	Add, subtract, multiply, and divide real numbers.	F3a

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20	Know that a natural number exponent indicates how many times the base is used as a factor.	F3a
5250-03	The students will demonstrate knowledge of polynominal and other algebraic expressions	F3a
01	Identify an algebraic term (116-434).	F3a
02	Identify an algebraic expression (116-435).	F3a
03	Classify polynomials by the number of terms or by degree (116-436).	F3a
04	Know the order of operations (116-437).	F3a
05	Add, subtract, and multiply polynomials, and divide a polynomial by a monomial (116-438).	F3a
06	Factor first- and second-degree polynomials.	F3a
07	Simplify rational algebraic expressions (116-440).	F3a
08	Know that rational algebraic expressions are reduced when the greatest common factor of both the numerator and the denominator is one (116-441).	F3a
09	Know that a number can be written in exponential form "a^n" where "a" is the base and "n" is the exponent.	F3a
5250-04	The students will demonstrate ability to solve simple linear equalities and inequalities.	F3a
01	Recognize algebraic sentences (equalities and inequalities).	F3a
02	Solve simple rational algebraic equations.	F2a, F3a
03	Define root (solution).	F3a
04	Find the solution set (116-447).	F3a
05	Know that equivalent open sentences have the same solution set.	F3a
06	Know that if the same number is added to or subtracted from each member of an inequality, the sense of the inequality is preserved (116-442).	F3a
07	Know that if each member of an inequality is multiplied or divided by the same positive number, the sense of the inequality is preserved (116-444).	F3a
08	Know that if each member of an inequality is multiplied or divided by the same negative number, the sense of the inequality is reversed (116-444).	F3a
09	Solve simple systems of linear equations containing two equations and two variables.	F3a
10	Solve simple word problems (116-448).	F2a, F3a
5250-05	The students will demonstrate knowledge of graphing.	F3a
01	Know that the axes of a rectangular (Cartesian) coordinate system separates a plane into quadrants.	F3a
02	Know that the rectangular coordinate system establishes a "one-to-one" correspondence between the set of all ordered pairs of real numbers and the set of points in a plane.	F3a
03	Define a relation (116-450).	F3a
04	Define abscissa and ordinate (x - coordinate and y - coordinate) (116-451).	F3a
05	Define the domain and range of a relation (116-452).	F3a
06	Define and determine slope of a line (116-459).	F3a
07	Know that when a line rises from left to right, its slope is a positive number (116-460).	F3a
08	Know that when a line falls from left to right, its slope is a negative number (116-461).	F3a
09	Know that the slope of a horizontal line is zero (116-462).	F3a
10	Know that the slope of a vertical line is undefined (116-463).	F3a
11	Know that the graph of a first-degree polynomial equation in one or two variables on the Cartesian Coordinate System is a straight line (116-455).	F3a
12	Know that the graph of a linear inequality in one variable on the real number line is a subset of a straight line (116-456).	F3a
13	Graph the solution set of a linear equation in one or two variables.	F3a
5250-06	The students will select three objectives from this course and apply each of these objectives in a job or work setting.	F3a
01	Describe how each of three selected objectives is applied or used in a job or work setting	F3a

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02	Select a job or work setting and show how the mathematics of this course has changed the manner in which work has been done in that job or setting.	F3a
03	Solve a problem applied to a job or work setting for each of three objectives from this course.	F2a, F3a
	GEOMETRY	
5300-01	The students will demonstrate knowledge of the basic terms and definitions of Euclidean geometry.	F3a
01	Know the undefined terms of geometry: point, line, and plane.	F3a
02	Know that a definition names the term being defined, classifies the term, describes the term, and is reversible.	F3a
03	Define a ray.	F3a
04	Define an angle.	F3a
05	Define parallel lines.	F3a
06	Define a transversal.	F3a
07	Define polygon.	F3a
08	Define congruency.	F3a
09	Define a bisector.	F3a
10	Define similar figures.	F3a
11	Define a circle.	F3a
12	Define a sphere.	F3a
5300-02	The students will demonstrate knowledge of principles of logic.	F3a
01	Use basic principles of logic.	F3a
02	Define a logical statement as a statement which is either true or false but not both.	F3a
03	Know that statements in the "if-then" form are statements of implication (conditional).	F3a
04	Know that if A implies B, then not A implies not B is the inverse of A implies.	F3a
05	Know that if A implies B, then not B implies not A is the contrapositive of A implies B.	F3a
06	Know that if A implies B, then B implies A is the converse of A implies B.	F3a
07	Know that the phrase "if and only if" refers to biconditional statements.	F3a
08	Know that a mathematical system is based on a set of unproved statements called assumptions, axioms, or postulates.	F3a
09	Know that a proof of a theorem is a logical sequence of statements which leads from the hypothesis to the conclusion.	F3a
5300-03	The students will demonstrate knowledge of the properties of equality and inequality.	F3a
01	Know that if A is related to A, then the relation is reflexive.	F3a
02	Know that if A is related to B and B is related to A, then the relation is symmetric.	F3a
03	Know that if A is related to B and B is related to C implies that A is related to C, then the relation is transitive.	F3a
04	Know that the equivalence relation is a relation which satisfies the reflexive, symmetric, and transitive properties.	F3a
5300-04	The students will demonstrate knowledge of relationships between angles.	F3a
01	Classify an angle as acute, right, obtuse, or straight.	F3a
02	Define supplementary angles.	F3a
03	Define complementary angles.	F3a
04	Calculate the measure of angles in degrees and minutes.	F3a
05	Define right angles.	F3a
06	Define perpendicular lines.	F3a
07	Classify types o angles formed when two lines are intersected by a transversal as alternate interior, corresponding, alternate exterior, and interior angles on the same side of the transversal.	F3a

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08	Define adjacent angles.	F3a
09	Define vertical angles.	F3a
5300-05	The students will demonstrate knowledge of triangles and polygons.	F3a
01	Define a triangle.	F3a
02	Define attitudes, median, and angle bisectors of a triangle.	F3a
03	Classify a triangle according to the measure of its sides or by its largest angle.	F3a
04	Know that the sum of the measures of the three interior angles of a triangle is 180°.	F3a
05	Show congruency and similarity of triangles and polygons by use of geometric methods.	F3a
06	Know that the sum of the measures of two sides of a triangle is greater than the measure of the third side.	F3a
07	Know the properties of the special triangles: 30-60-90; 45-45-90, and equilateral triangles.	F3a
5300-06	The students will demonstrate knowledge of the circle and the relationships between circles and lines.	F3a
01	Identify chords, secants, tangents, radii, and diameters relative to a circle.	F3a
02	Define an arc.	F3a
03	Know how the measure of inscribed angles, central angles, angles formed by a tangent and a chord, or angles formed by two intersecting chords are related to the measures of their respective intercepted arcs.	F3a
04	Know how the measure of the angles formed by two secant lines, two tangent lines, or a tangent line and a secant line are related to the measure of the intercepted arcs of the circle.	F3a
05	Know that a circle is circumscribed about a figure if each vertex of the figure lies on the circle.	F3a
06	Know that a circle is inscribed in a figure if each side of the figure is tangent to the circle.	F3a
5300-07	The students will demonstrate knowledge of length, area, volume, and angle measure of geometric figures.	F3a
01	Add or subtract the measure of angles.	F3a
02	Know the Pythagorean theorem.	F3a
03	Compute areas of triangles, rectangles, parallelograms, trapezoids, and circles by formula.	F3a
04	Compute surface areas and volumes of cubes, prisms, right circular cylinders, right circular cones, and spheres by formula.	F3a
05	Determine the distance between two points by formula.	F3a
5300-06	The students will select three objectives from this course and apply each of these objectives in a job or work setting.	F3a
01	Describe how each of three selected objectives is applied or used in a job or work setting	F3a
02	Select a job or work setting and show how the mathematics of this course has changed the manner in which work has been done in that job or setting.	F3a
03	Solve a problem applied to a job or work setting for each of three objectives from this course.	F2a, F3a
HEALTH EDUCATION		
	PERSONAL HEALTH	
7100-01	The students will continue to recognize, develop, and practice life skills that are associated with improved personal health and quality of life.	C1
01	Demonstrate goal setting and the decision-making process relative to good health choices and life situations.	C1
02	Identify verbal and nonverbal communication skills in building healthy relationships.	G4

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		NCEO CODE
03	Recognize, identify, and discuss positive, neutral, and negative health practices that are directly affected by a variety of persuasive sources (e.g., peers, media, and advertising).	F4
04	Discuss the relationship between positive and negative stress.	F4
05	Identify positive coping behaviors in dealing with life situations (e.g., divorce, death, rape, incest, abuse, suicide).	G1
06	Discuss the interrelationship of physical, social, and mental health (health triangle).	C1, G
07	Explain how emotions affect behavior.	F
08	Identify factors that influence and improve self-image.	G2a
09	Describe several resistance techniques as they relate to peer persuasion.	C, D
10	Discuss ways of developing and maintaining friendships.	G4a
11	Describe the stages of human development (infancy, childhood, adolescence, adulthood) and the unique contribution healthy living makes to each stage.	F4
12	Discuss how responsible behavior during adolescence and youth impacts health during middle and old age.	F1
7100-02	The students will demonstrate an understanding of human sexuality, its psychological, social, emotional, and physical implications of developing and maintaining a responsible, healthy lifestyle.	C1, F1
01	Discuss responsible sexual behavior stressing the short- and long-term benefits of strong families, abstinence, and fidelity.	C2e
02	Recognize the impact of sexual behavior on one's goals and self-esteem.	F4
03	Develop the mindset and skills that promote responsible, principle-centered decision-making when responding to peer, media, societal, and negative family influences that encourage high-risk behaviors.	C, D
04	Discuss the physical and emotional aspects of relationships and the impact they have on dating, the family, marriage, love, and infatuation.	D1a, F4
05	Discuss maturation and the stages of sexual development throughout the life cycle.	F4
06	Discuss the anatomy and physiology of the male and female reproductive systems.	F4
07	Discuss conception, fetal development, birth defects, the risk factors involved in pregnancy, and the birth process.	C2e, F4
08	Recognize the impact teen pregnancies have on quality of life, incidence of child abuse, and changes of lifestyle.	F4
09	Discuss the legal, social, and emotional implications associated with pornography, prostitution, sexual abuse, incest, and rape persuasion.	F4
7100-03	The students will continue to recognize, develop, and practice positive healthy lifestyles that are associated with improved physical health and quality of life.	C1
01	Explain how good nutrition is associated with feeling good and performing well.	C1a
02	Explain the concept of caloric input and expenditure as it relates to maintaining desired body weight.	C1a
03	Explain the benefits of exercise, sleep, and relaxation on overall health.	C2, C3
04	Explain why specific health practices (cleanliness and grooming) are especially important to the social, physical, and emotional health of middle school students.	C3a
05	Discuss eating disorders and the consequences of improper nutritional diets (e.g., bulimia, anorexia).	C2
06	Recognize and discuss positive and negative health practices that are affected by a variety of persuasive sources (e.g., peers, media, quackery).	C2, F4
7100-04	The students will understand factors that lead to high-risk lifestyles, including disease prevention.	C2
01	Identify methods of preventing communicable and chronic diseases including sexually transmitted diseases.	C23
02	Identify and discuss the immediate and long-term (physical, mental, social) effects that may result from the use of drugs, alcohol, and tobacco products.	C2e
03	Discuss ways of preventing substance abuse and abuse by teenagers.	C2e

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		NCEO CODE
04	Identify positive alternatives to the use of tobacco, alcohol, and other drugs.	C2e
05	Identify and discuss common myths about the use of alcoholic beverages.	C2e, F4
06	Describe the physiology of the disease AIDS.	C2e, F4
07	Identify the modes of HIV transmission .	C2e, F4
08	Discuss ways in which HIV infection and AIDS can be prevented.	C2e, F4
09	Discuss the most recent means of treating HIV infection and AIDS.	F4
10	Recognize the social implications HIV/AIDS has in our society.	F4
11	Describe strategies for HIV/AIDS prevention such as decision-making skills and refusal skills in responding to negative pressure from peers.	C2e, D
7100-05	The students will demonstrate emergency procedures to include basic first aid.	C2a
01	Identify the emergency telephone numbers in your area and necessary information to be given.	C2a
02	Identify and describe the immediate first aid procedure for the following:	
	a. shock	C2
	b. heart attack or stroke	C2
	c. choking	C2
	d. cessation of breathing	C2
	e. severe bleeding	C2
	f. fractures	C2
	g. heat exhaustion and heat stroke	C2
03	Demonstrate the emergency procedure for treatment of minor cuts and abrasions, nosebleeds, pulled muscles, and sprains.	C2
04	Explain accident prevention measures for seasonal activities (e.g., swimming, boating, cycling, camping, backpacking, hunting, skiing, snowmobiling, tubing).	C2a
05	Discuss how to protect one's self from natural disasters (e.g., windstorms, floods, earthquakes).	C2a
06	Review accident prevention measures for home and school.	C2a
	MOVEMENT AND FITNESS	C3
7650-01	The students will continue to develop motor and health related fitness.	C1b
01	Participate in a minimum of three 15-minute aerobic workouts per week.	C3
02	Perform conditioning exercises for flexibility, strength, agility, balance, speed/reaction time, and endurance. Emphasis will be placed on the following major muscle groups:	C3
	a. arm and shoulder	C3
	b. abdomen	C3
	c. back	C3
	d. legs	C3
03	Understand the basic principles of heart-lung fitness, particularly heart rate and training zone.	C1b, C3
04	Define muscular endurance, flexibility, heart-lung endurance, strength, aerobic, anaerobic, isotonic, and isometric.	C3
05	Demonstrate the principles of warm-up and cool-down.	C3
06	Participate in a standardized test to assess level of fitness (i.e., AAHPERD Youth Fitness Test or AAHPERD Health Related Test). The competency level for each test is the 60th percentile.	C3a
7650-02	The students will continue to develop skill in a variety of core team sports.	C1b
01	Acquire the skills and knowledge of rules and strategies needed to participate in the basic core team sports.	C1b, F4
	a. VOLLEYBALL	
	1. Overhand Serve: Correctly serve the ball over the net and in bounds at least seven out of ten trials.	F4

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		NCEO CODE
	2. Forearm Bump Pass: Stand four feet from a wall, self-toss the ball and execute the forearm bump pass to a target on the wall at least seven consecutive times. The target area is between a line six feet and ten feet high.	F4
	3. Set/Volley/Overhead Pass: Stand four feet from the wall, overhead pass and set the ball above and eight-foot line with control on ten consecutive hits.	F4
	4. Spike: Using an open hand, spike a stationary ball at least three out of five times into the court.	F4
	b. BASKETBALL	
	1. Passing: Stand six feet from the wall and chest pass the ball to a three-foot square target on the wall ten consecutive times.	F4
	2. Dribbling: Using correct dribbling techniques, weave through, without error, five obstacles placed three feet apart.	F4
	3. Set Shot: Using the correct one-hand set shot technique, make at least three out of five shots from at least ten feet from the basket.	F4
	4. Lay-Up: Dribble from a 45 degree angle and correctly shoot a lay-up shot making at least three out of five shots.	F4
	c. SOCCER	
	1. Dribble: Weave in and out three consecutive times without error through a course of five cones three yards apart.	F4
	2. Passing: Four performers form a 12-yard square. The passer must pass the ball to each of the other three performers using correct passing techniques.	F4
	3. Shooting: The shooter stands on the 12-yard penalty line. The feeder faces the shooter and as the shooter moves right, the feeder pushes the ball to the shooter. The shooter runs to the ball and shoots into the goal. The drill continues alternating left and right until six balls are shot. The shooter must score at least four out of six goals.	F4
	4. Goalie Punt: Using correct goalie punting technique, punt a minimum of 25 yards on at least three out of five trials.	F4
	5. Using correct trapping techniques, trap a ball rolled from 15 yards away three out of five times.	F4
	d. FLAG FOOTBALL	
	1. Passing: Within a 15-yard area, pass successfully three out of five times to a receiving running a down-and-out pattern.	F4
	2. Receiving: Within a 10-yard area, receive a pass successfully four out of five times after executing a down-and-out pattern.	F4
	3. Kicking: Kick the ball from a kicking tee a minimum of 30 yards three out of five times.	F4
	4. Punting: Punt the ball, using correct form, a minimum of 30 yards three out of five times.	F4
02	Identify, use, and care properly for equipment used in various sports and recreational activities.	D, F4
03	Avoid unsafe playing conditions and conduct.	C2a
7650-03	The students will continue to expand their knowledge and understanding of cognitive, affective, and psycho-motor dance skills.	F4b
01	Demonstrate a knowledge of appropriate conditioning and preparation for dance. Emphasis should be on strength, flexibility, endurance, and control as integrated into dance vocabulary and aesthetic movement. Fitness principles and maintenance should be emphasized.	C1b, F4b

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		NCEO CODE
02	Demonstrate competency in the five basic locomotor steps (walk, run, leap, jump, hop) using a variety of simple locomotor combinations.	F4
03	Demonstrate a variety of movement combos performed within a rhythmic structure correctly identifying meter, accents, tempo, and duration (cultural dances could be learned and analyzed as part of this objective).	F4, F4b
04	Demonstrate knowledge of spatial elements by learning, creating, and performing axial and locomotor patterns, varying spatial area, floor patterns, direction, and levels in space (folk dances could be integrated within this objective).	F3, F4
05	Create and demonstrate, in a small group, an aerobic dance/exercise routine to music that includes at least three contrasting kinds of energy.	F4b
06	Demonstrate proficiency in basic steps of two social dances and one folk dance with an emphasis on courtesy, etiquette, and social skills.	F4b
7650-04	The students will continue to develop leadership, fairness, courtesy, and social skills.	G3a, G4
01	Develop leadership skills by serving in two or more positions as a leader, team captain, referee, equipment manager, intramural official, timer, scorekeeper, or student aide.	F
02	Practice fairness and courtesy.	E, G3a
	PARTICIPATION SKILLS AND TECHNIQUES	
7700-01	The student will develop skills in and knowledge of individual sports, games, and activities.	C1b
01	Acquire the basic skills and knowledge of rules, safety, and etiquette to participate in one racquet sport.	C1b, C2a, F4
02	Demonstrate correctly the following skills in one of these racquet sports:	F4
	Tennis: Grip; Ready Position; Forehand Ground stroke; Backhand Ground stroke; Overhead Serve **Badminton**: Grip; Ready Position; Sort Serve; Forehand Clear; Forehand Drop; Backhand Clear; Backhand Drop **Racquetball**: Grip; Ready Position; Serve; Forehand; Backhand	F4
03	Acquire the basic skills, knowledge or rules, safety, and etiquette to participate in either golf or bowling.	C1b, F4
04	Demonstrate correctly the following skills in one of these sports:	C1b, F4
	Golf: Grip; Addressing the ball; Stance; Swing; Putting **Bowling**: Grip; Four-step approach; Release; Follow through	
05	Acquire the basic skills and knowledge necessary to participate in at least two other lifetime sports, games or activities such as:	C1b, F4
	Aerobic; Bowling; Dance; Handball; Racquetball; Tennis; Archery; Wrestling Cross-Country Skiing; Downhill Skiing; Recreational Games; Self-Defense; Tumbling/Gymnastics; Rope Jumping; Weight Training; Roller Skating Ice Skating; Badminton; Cycling; Golf; Jogging; Swimming	

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				NCEO CODE
7700-02	The students will continue to develop skills in and knowledge of team sports.			C1b
01	Demonstrate increased skill competency in two team sports.			C1b
02	Demonstrate game strategies for two team sports.			F4
7700-03	The students will maintain an acceptable level of physical fitness.			C3a
01	Demonstrate motor fitness (i.e., speed, reaction time, agility, balance, and coordination).			C3
02	Demonstrate a level of fitness in each of the following health related areas as prescribed:			
	Health Related	Girls	Boys	
a.	Cardiovascular	1-1/2 mile run 15 min. or 12 min. walk/run 2100 yards or 3 mile walk test under 41 min.	1-1/2 mile run 11 min. 15 sec. or 12 min. walk/run 2650 yards or 3 mile walk test under 39 min.	C3
b.	Arm and shoulder strength	Flexed arm hang 8 sec.	Pull-ups 5	C3
c.	Abdominal strength/endurance	Flexed leg sit-ups 38	Flexed leg sit-ups 45	C3
d.	Flexibility	Sit--Reach 35	Sit--Reach 29	C3
e.	Recommended that percent body fat be sum of tricep and subscapular skin fold	18% - 22% 16-29 mm	15% - 17% 13-17 mm	C3

SCIENCE

LIFE SCIENCE

3200-01	The students will demonstrate a knowledge of scientific methods and conduct experiments in a life science.	F4a
01	List processes used in solving problems scientifically and identify ways to collect and record data.	F4a
02	Differentiate between a hypothesis and a theory.	F4a
03	Formulate a hypothesis in life science, based on observing life around them. Test the hypothesis.	F4a
04	Define observation, interpretation, and inference.	F4a
05	Manipulate a variable in a controlled experiment.	F4a
06	Formulate conclusions from a graph or table.	F4a
07	Write a scientific report of an experiment.	F3c, F4a
3200-07	The students will investigate the ecological relationships between living things and their environments.	F4a
01	Illustrate the flow of energy and matter among organisms in food chains, webs, and pyramids through a variety of diagrams, models, and investigations.	F4a
02	Explain the relationship among organisms in a biological community by defining the roles (producer, consumer, decomposer) of the organisms and their ecological niches within the habitat.	F4a
03	Name the components of the water, carbon, nitrogen, and oxygen cycles and explain the importance of each cycle.	F4a
04	Identify the major biomes and examine relationships between abiotic and biotic factors in the biomes (e.g., desert, tropical rain forest, tundra, grassland, coniferous forest, temperature deciduous forest).	F4a

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		NCEO CODE
3200-08	The students will investigate ways in which man's impact upon the environment affects living things.	F4a
01	Explain how increases in the human population affect the environment.	F4a
02	Distinguish between renewable and nonrenewable resources.	F4a
03	Give examples of extinct and endangered species of both plants and animals.	F4a
04	Discuss some conservation practices for wildlife.	F4a
3200-09	The students will explore the career opportunities in the life sciences.	A2f, F4a
01	Investigate careers in the life sciences.	A2f, F4a
	EARTH-SPACE	
3220-01	The students will demonstrate a knowledge of scientific methods and will conduct experiments in earth-space science.	F4a
01	List processes used in solving problems scientifically and identify ways to collect and record data.	F4a
02	Formulate and test an hypothesis in earth-space science.	F4a
03	Manipulate a variable in an experiment.	F4a
04	Plot data from experiments on graphs, charts, or other displays.	F4a
05	Formulate conclusions based upon the investigation.	F4a
3220-02	The students will identify rocks and classify them according to origin.	F4a
01	Define: igneous, metamorphic, and sedimentary.	F4a
02	Communicate knowledge of the rock cycle through models, diagrams, or demonstrations	F4a
03	Identify by name some common rocks from local strata.	F4a
04	Identify some characteristics of common igneous , sedimentary, and metamorphic rocks.	F4a
3220-03	The students will identify the characteristics, composition, and use of common minerals.	F4a
01	Define mineral and describe some characteristics of common minerals.	F4a
02	Use a mineral key to identify some common minerals.	F4a
03	Demonstrate the following properties of minerals: cleavage, luster, streak, hardness, crystal structure, and specific gravity.	F4a
3220-04	The students will relate the process of weathering, erosion, and deposition to soil building and water movement.	F4a
01	Distinguish among weathering, erosion, and deposition.	F4a
02	Differentiate between chemical and mechanical weathering.	F4a
03	Identify and describe the effects of erosion caused by water, wind, and glaciation.	F4a
04	Identify common types of deposition: deltas, moraines, and dunes.	F4a
05	Describe the effects of weathering, erosion, and deposition on streams and lakes.	F4a
3220-05	The students will use the plate tectonics theory and the effects of internal forces on the earth to explain the earth's surface features.	F4a
01	Describe the theory of moving plates within the lithosphere.	F4a
02	Identify evidence that supports the existence of moving plates.	F4a
03	Explain the relationship between moving plates and earthquakes.	F4a
04	Identify the earth's layers and explain how earthquake shock waves travel through each layer.	F4a
05	Describe how moving plates can cause volcanic activity.	F4a
06	Infer how structural features such as mountains, plateaus, and faults may form.	F4a
3220-06	The students will compare renewable and nonrenewable types of energy sources.	F4a
01	Identify sources of energy as being renewable or nonrenewable.	F4a
02	Explain how fossil fuels, geothermal, wind, water, and nuclear energy sources result from natural earth processes.	F4a

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		NCES CODE
03	Discuss the positive and negative aspects of using the energy sources in number 2.	F4a
04	Communicate ways to conserve renewable and nonrenewable energy sources.	F4a
3220-07	The students will investigate geologic history.	F4a
01	Review how fossils are formed.	F4a
02	Explain the importance of superposition.	F4a
03	Discuss the major events of the four geologic eras.	F4a
3220-08	The students will describe natural factors that determine weather and climate.	F4a
01	Describe global air masses in terms of air pressure, wind patterns, temperature, and water content.	F4a
02	Discuss the origin and effects of cold fronts, warm fronts, and occluded fronts.	F4a
03	Identify causes and effects of local and prevailing winds.	F4a
04	Describe how mountains and large bodies of water influence the weather and climate.	F4a
05	Explain how temperature, humidity, and barometric pressure influence the weather and the climate.	F4a
06	Obtain and interpret readings from weather instruments measuring temperature, humidity, wind velocity and direction, and barometric pressure.	F4a
07	Identify causes and effects of human activity on the atmosphere and weather (e.g., the greenhouse effect, pollution, albedo).	F4a
08	Describe ways to avoid dangers related to severe weather conditions.	F4a
3220-09	The students will investigate the solar system and the universe.	F4a
01	Identify the relative size and position of stars, planets, the solar system, galaxies, meteoroids, and comets.	F4a
02	Discuss the orbits and periods of comets.	F4a
03	Identify the conditions necessary for eclipses to occur.	F4a
04	Explain the causes and effects of rotation and revolution of bodies in the solar system.	F4a
05	Demonstrate the causes of the seasons on earth.	F4a
3220-10	The students will indicate major events in man's exploration of space and explain the important role the events have played in advancing technology.	F4a
01	Discuss the development and importance of rockets, satellites, the space shuttle, and instruments to explore space.	F4a
02	Discuss innovations in areas such as radio astronomy, solar energy, medicine, communications, and materials development that have come from the space program.	F4a
3220-11	The students will explore the career opportunities in earth-space sciences.	A2f, F4a
01	Investigate careers in the earth-space sciences.	A2f, F4a
	PHYSICAL SCIENCE	
3240-01	The students will demonstrate a knowledge of scientific methods and will conduct experiments in physical science.	F4a
01	List processes used in solving problems scientifically and identify ways to collect and record data.	F4a
02	Formulate and test an hypothesis in physical science.	F4a
03	Manipulate a variable in an experiment.	F4a
04	Plot data from experiments on graphs, charts, or other displays.	F4a
05	Formulate conclusions based upon the investigation.	F4a
3240-02	The students will identify physical and chemical properties of matter.	F4a
01	Define matter and energy.	F4a
02	Identify the states of matter and describe ways that matter can change from one state to another.	F4a

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		NCEO CODE
03	Demonstrate chemical properties of matter such as acidity, basicity, combustibility, and reactivity.	F4a
04	Compare physical properties of various substances (e.g., shape, density, solubility, odor, melting point, boiling point).	F4a
05	Demonstrate density.	F4a
06	Describe the characteristics and give examples of : (a) elements, compounds, and mixtures; (b) acids, bases, and salts; and (c) organic and inorganic substances.	F4a
07	Compare physical and chemical changes. Cite examples of each.	F4a
08	Explain how matter and energy are conserved in chemical and physical changes.	F4a
3240-03	The students will explain the structure of an atom.	F4a
01	Discuss the atomic theory of matter.	F4a
02	Draw and explain the Bohr and cloud models of the atom.	F4a
03	Describe the electron, proton, and neutron in terms of their location in the atom, their charge, and their mass.	F4a
04	Illustrate how an element can become a positive ion. A negative ion. In each case, name the element and then the ion.	F4a
05	Define isotope and give examples.	F4a
06	Define nuclear fission and fusion.	F4a
3240-04	The students will use a periodic chart for obtaining information about elements.	F4a
01	Explain the structure of a periodic chart and the arrangement of the elements on it.	F4a
02	Describe the relationship of the elements within periods and families on a periodic chart.	F4a
03	Distinguish in general terms between ionic and covalent bonding.	F4a
04	Using a periodic chart, compare the reactivity of some of the elements.	F4a
3240-05	The students will investigate the basic principles and technological applications of force, motion, and work.	F4a
01	Explain how mass and weight differ.	F4a
02	Describe the effect of gravity on stationary and on moving objects.	F4a
03	Demonstrate and explain Newton's three laws of motion.	F4a
04	Identify conditions when forces are balanced and when they are unbalanced.	F4a
05	Operate the following types of machines and demonstrate how they make work easier: lever, pulley, inclined plane, wedge, screw, wheel, and axle.	F4a
06	Perform calculations using the equation, "work equals forces times distance" and use the correct units.	F4a
07	Distinguish between: (a) speed and velocity, and (b) velocity and acceleration.	F4a
08	Apply the principles of force and motion to powered vehicles, rockets, projectiles, and restraining devices.	F4a
3240-06	The students will demonstrate and describe the properties of sound.	F4a
01	Demonstrate longitudinal (compressional) and transverse waves and discuss their characteristics.	F4a
02	Describe how frequency of sound waves is related to musical sounds.	F4a
03	Demonstrate volume, pitch, and quality of sounds.	F4a
04	Discuss what causes echoes.	F4a
05	Demonstrate and discuss the interference of sound waves.	F4a
06	Explain the term "decibel" and describe the effects on an individual as the decibel level rises.	F4a
3240-07	The students will investigate the basic characteristics of light and its technological applications.	F4a
01	Compare some characteristics of light waves to those of sound waves: relative speed, type of wave, medium required for travel.	F4a

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		NCEO CODE
02	Use a prism, a diffraction grating, etc., to produce a spectrum.	F4a
03	Explain what causes the colors to be dispersed.	F4a
04	Distinguish between colors in terms of wavelength and frequency.	F4a
05	Demonstrate and describe the images formed in (a) plane mirrors, (b) convex mirrors, (c) concave mirrors.	F4a
06	Use a ray diagram to show the path of light passing through (a) a convex lens, and (b) a concave lens.	F4a
07	Compare the characteristics of real and virtual images.	F4a
08	Describe the use of lenses/mirrors in eyeglasses, cameras, microscopes, telescopes.	F4a
09	Identify the characteristics of light that make lasers possible.	F4a
3240-08	The students will explore the career opportunities in the physical sciences.	A2f, F4a
01	Investigate careers in the physical sciences.	A2f, F4a
LANGUAGE ARTS		
	ENGLISH	
4080-01-1	The students will read and discuss stimulating literature, identifying details which describe people accurately (Literature examples may include poetry.) (listening, speaking, reading, critical thinking, prewriting).	F1a, F3b, F4b
01-1	Share their own opinions, reactions, and impressions of the literature.	F4b
02-1	Practice affective listening skills to become responsive listeners (i.e., paraphrasing, using sequential dialogue, and summarizing).	F1a
03-1	Select fiction and nonfiction material which is stimulating and interesting for personal reading and classroom assignments.	F4a, F4b
04-1	Discuss the physical appearance and character traits of the people in each selection.	F4b
05-1	Analyze the actions of people.	F2a, F4b
06-1	Differentiate between important and unimportant details.	F4
07-1	Define unfamiliar vocabulary in context.	F4a
08-1	Choose a familiar person to describe.	F3c
09-1	Determine an appropriate audience.	F3c
10-1	Use prewriting strategies (e.g., outlining, brainstorming, listing, mapping, clustering, webbing, etc.).	F3c
4080-02-1	The students will describe a familiar person (listening, speaking, reading, critical thinking, writing, responding, revising).	F1a, F2a, F3a, F3b
01-1	Use appropriate voice.	F1a
02-1	Use specific details and examples of appearance, action, and speech.	F1a, F3c
03-1	Use specific nouns, action verbs, and vivid adjectives to describe a familiar person.	F1a, F3c
04-1	Participate in response groups for peer evaluation.	F4, G4b
05-1	Analyze and clarify the paper to improve its meaning and communication.	F2a, F3c
06-1	Make necessary structural and syntactical changes for improvement.	F3c
4080-03-1	The students will produce, through the editing process, a final draft of a character sketch that conforms to standard English (listening, speaking, reading, writing, critical thinking, editing, publishing).	F3c
01-1	Correct fragments and run-ons.	F3c
02-1	Use adjectives and adverbs correctly.	F3c
03-1	Use the proper form of pronouns.	F3c
04-1	Use correct subject-verb agreement.	F3c
05-1	Create and punctuate more sophisticated sentences by using sentence combining techniques where applicable.	F3c
06-1	Use specific words and details.	F3c
07-1	Eliminate slang and jargon.	F3c

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		NCEO CODE
08-1	Define unfamiliar terms for the audience.	F3c
09-1	Correct misplaced phrases and clauses.	F3c
10-1	Punctuate the final draft correctly.	F3c
11-1	Paragraph the final draft appropriately.	F3c
12-1	Use transitions between paragraphs.	F3c
13-1	Use correct capitalization.	F3c
14-1	Use standard spelling.	F3c
15-1	Eliminate inconsistencies in tense.	F3c
16-1	Correct faulty parallelism.	F3c
17-1	Eliminate redundancies.	F3c
18-1	Share the final draft.	F3c
4080-01-2	The students will recognize that reading selections relate to their own experiences and to the experiences, beliefs, attitudes, commitments, and values of friends and relatives (critical thinking, prewriting).	F3b, F4b
01-2	Share their own opinions, reactions, and impressions of the literature.	F1a, F4b
02-2	Practice affective listening skills to become responsive listeners (i.e., paraphrasing, using sequential dialogue, and summarizing).	F1a
03-2	Select stimulating and interesting fiction and nonfiction material for personal reading and classroom assignments.	F3b
04-2	Recognize that reading conveys universal experiences.	F4b
05-2	Discuss the experiences of the character in the anecdote or narrative.	F4b
06-2	Predict the most probably outcome of the selections.	F4b
07-2	Define unfamiliar vocabulary in context.	F3b
08-2	Select an experience of a friend for relative to write about.	F3c
09-2	Determine appropriate audience.	F3c
10-2	Use prewriting strategies (e.g., outlining, brainstorming, listing, mapping, clustering, webbing, etc.).	F3c
4080-02-2	The students will compose narratives based on the experience of a friend or relative (listening, speaking, reading, critical thinking, writing, responding, revising).	F3c
01-2	Use appropriate voice.	F3c
02-2	Develop a short narrative based on a single experience.	F3c
03-2	Describe the character of a friend or relative by showing specific details of appearance, action, and speech.	F3c
04-2	Use precise vocabulary.	F3c
05-2	Participate in peer response groups for peer evaluation.	F3c, G4b
06-2	Analyze and clarify the paper to improve its meaning and communication.	F3c
07-2	Make necessary structural, syntactical, and graphic changes for improvement.	F3c
4080-03-2	The students will produce a final draft of a narrative based on the experience of a friend for relative (listening, speaking, reading, critical thinking, editing, publishing).	F3c
01-2	Correct fragments and run-ons.	F3c
02-2	Use adjectives and adverbs correctly.	F3c
03-2	Use the proper form of pronouns.	F3c
04-2	Use correct subject-verb agreement.	F3c
05-2	Create and punctuate more sophisticated sentences by using sentence combining techniques where applicable.	F3c
06-2	Use specific words and details.	F3c
07-2	Eliminate slang and jargon.	F3c
08-2	Define unfamiliar terms for the audience.	F3c
09-2	Correct misplaced phrases and clauses.	F3c
10-2	Punctuate the final draft correctly.	F3c
11-2	Paragraph the final draft appropriately.	F3c

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		NCES CODE
12-2	Use transitions between paragraphs.	F3c
13-2	Use correct capitalization.	F3c
14-2	Use standard spelling.	F3c
15-2	Eliminate inconsistencies in tense.	F3c
16-2	Correct faulty parallelism.	F3c
17-2	Eliminate redundancies.	F3c
18-2	Share the final draft.	F3c
	Project/Biographical Sketch of a Famous Contemporary Person	
4080-01-3	The students will find, use, and analyze information from the library media center and other locations about a famous contemporary person (listening, speaking, reading, critical thinking, prewriting).	F2a, F4
01-3	Choose a famous, contemporary person.	F4
02-3	Read an encyclopedia article for a brief overview of the person's life, habits, education, etc.	F4
03-3	Formulate questions to explore the topic.	F4
04-3	Determine search terms or key words to locate additional information.	F4
05-3	Locate materials by using indexing systems (print or electronic) such as library media catalogs, magazine indexes, newspaper indexes, Current Biography, etc.	F4
06-3	Find relevant, current, and accurate information from various sources that answers predetermined questions using at least one magazine.	F4
07-3	Differentiate between fact and opinion in each source.	F4
08-3	Evaluate information.	F4
09-3	Synthesize information from selected sources.	F4
10-3	Define unfamiliar vocabulary in context.	F4
11-3	Determine an appropriate audience.	F4
12-3	Use prewriting strategies (e.g., outlining, brainstorming, listing, clustering, mapping, etc.)	F3c, F4
4080-02-3	The students will create a project/biographical sketch of a famous, contemporary person (listening, speaking, reading, critical thinking, writing, responding, revising).	F3c
01-3	Produce a comprehensive, factual, and informative project/paper (e.g., brochure, encyclopedia article, magazine article, newscast, editorial script, obituary, etc.)	F3c
02-3	Capture accurately the contribution of the person.	F3c
03-3	Use appropriate voice.	F3c
04-3	Synthesize and organize information.	F3c
05-3	Use new words correctly.	F3c
06-3	Prepare a simple bibliography.	F3c
07-3	Participate in response groups for peer evaluation.	F3c, G4b
08-3	Analyze and clarify the paper to improve its meaning and communication.	F2a, F3c
09-3	Make necessary structural, syntactical, and graphic changes for improvement.	F3c
4080-03-3	The students will produce a final draft of a project/biographical sketch of a famous, contemporary person (listening, speaking, reading, writing, critical thinking, editing, publishing).	F3c
01-3	Correct fragments and run-ons.	F3c
02-3	Use adjective and adverbs correctly.	F3c
03-3	Use the proper form of pronouns.	F3c
04-3	Use correct subject-verb agreement.	F3c
05-3	Create and punctuate more sophisticated sentences by using sentence combining techniques where applicable.	F3c
06-3	Use specific words and details.	F3c
07-3	Eliminate slang and jargon.	F3c
08-3	Define unfamiliar terms for the audience.	F3c

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		NCEO CODE
09-3	Correct misplaced phrases and clauses.	F3c
10-3	Punctuate the final draft correctly.	F3c
11-3	Paragraph the final draft correctly.	F3c
12-3	Use transitions between paragraphs.	F3c
13-3	Use correct capitalization.	F3c
14-3	Use standard spelling.	F3c
15-3	Eliminate inconsistencies in tense.	F3c
16-3	Correct faulty parallelism.	F3c
17-3	Eliminate redundancies.	F3c
18-3	Share the final draft.	F3c
	Persuasive Paper Presenting a Case for Meeting the Needs of a Friend or Relative	
4080-01-4	The students will explore the needs of others through literature study and discussion (listening, speaking, reading, critical thinking, prewriting).	F4b
01-4	Share their own opinions, reactions, and impressions of the literature.	F4b
02-4	Practice affective listening skills to become responsive listeners (i.e., paraphrasing, using sequential dialogue, and summarizing).	F1a
03-4	Separate fact from opinion.	F2a
04-4	Identify, in written and visual works (television and movies), the common persuasive techniques of the following:	F4
	Band wagon (e.g., "Join the Pepsi Generation.")	F4
	Card stacking (e.g., "Four out of five doctors recommend...")	F4
	Transfer (e.g., "Wheaties, the Breakfast of Champions.")	F4
05-4	Locate apparent causes and effects and evaluate their validity.	F4
06-4	Draw and support conclusions about the intent of the author/speaker.	F4
07-4	Define unfamiliar vocabulary in context.	F4
08-4	Choose a friend or relative and select one of his/her needs about which he/she feels strongly.	F4
09-4	Determine an appropriate audience.	F4
10-4	Use prewriting strategies (e.g., outlining, brainstorming, listing, mapping, clustering, webbing, etc.)	F3c
4080-02-4	The students will present a case for the needs of others in persuasive papers and oral presentations (listening, speaking, reading, critical thinking, writing, responding, revising).	F1a, F3c
01-4	Take a stand on a particular issue relating to the needs of others.	F1a, F3c
02-4	Use appropriate voice.	F1a, F3c
03-4	Express persuasive ideas that lead to a logical outcome.	F1a, F3c
04-4	Support the case logically and unemotionally with examples or facts.	F1a, F3c
05-4	Use words the persuade most effectively.	F1a, F3c
06-4	Anticipate counter arguments and refute them.	F1a, F3c
07-4	Construct an effective conclusion.	F1a, F3c
08-4	Participate in response groups for peer evaluation.	F1a, F3c
09-4	Analyze and clarify the paper to improve its meaning and communication.	F1a, F3c
10-4	Make necessary structural, syntactical, and graphic changes for improvement.	F1a, F3c
4080-03-4	The students will produce a persuasive final draft which conforms to standard English (listening, speaking, reading, critical thinking, editing, publishing).	F3c
01-4	Correct fragments and run-ons.	F3c
02-4	Use adjectives and adverbs correctly.	F3c
03-4	Use the proper form of pronouns.	F3c
04-4	Use correct subject-verb agreement.	F3c
05-4	Create and punctuate more sophisticated sentences by using sentence combining techniques where applicable.	F3c

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		NCEO CODE
06-4	Use specific words and details.	F3c
07-4	Eliminate slang and jargon.	F3c
08-4	Define unfamiliar terms for the audience.	F3c
09-4	Correct misplaced phrases and clauses.	F3c
10-4	Punctuate the final draft correctly.	F3c
11-4	Paragraph the final draft appropriately.	F3c
12-4	Use transitions between paragraphs.	F3c
13-4	Use correct capitalization.	F3c
14-4	Use standard spelling.	F3c
15-4	Eliminate inconsistencies in tense.	F3c
16-4	Correct faulty parallelism.	F3c
17-4	Eliminate redundancies.	F3c
18-4	Share the final draft.	F3c
	Letter of Request or Response	
4080-01-5	Students will comprehend the need for letters of request and response (listening, speaking, reading, critical thinking, prewriting).	F4
01-5	Practice affective listening skills to become responsive listeners (i.e., paraphrasing, using sequential dialogue, and summarizing).	F1a
02-5	Identify the various types of request and response letters.	F4a
03-5	Assess the purpose of the letters.	F4a
04-5	Differentiate fact from opinion.	F4a
05-4	Discuss proper format of business correspondence.	F4a
06-5	Define unfamiliar vocabulary in context.	F3c
07-5	Select a subject about which to write a letter or request.	F3c
08-5	Assess the audience for the letter.	F3c
09-5	Use prewriting strategies (e.g., outlining, brainstorming, listing, mapping, clustering, webbing, etc.)	F3c
4080-02-5	The students will compose a letter of request or response (e.g., letter of opinion, complaint, request, or compliment) (listening, speaking, reading, critical thinking, writing, responding, revising).	F3c
01-5	Use appropriate business letter format.	F3c
02-5	State the purpose of the letter clearly.	F3c
03-5	Relate the problem, complaint, question, or compliment effectively.	F3c
04-5	Use precise vocabulary.	F3c
05-5	Participate in response groups for peer evaluation.	F3c
06-5	Analyze and clarify the paper to improve its meaning and communication.	F3c
07-5	Make necessary structural and syntactical changes for improvement.	F3c
4080-03-5	The students will produce final drafts of a request or response letter that conform to standard English (listening, speaking, reading, writing, critical thinking, editing, publishing).	F3c
01-5	Correct fragments and run-ons.	F3c
02-5	Use adjectives and adverbs correctly.	F3c
03-5	Use the proper form of pronouns.	F3c
04-5	Use correct subject-verb agreement.	F3c
05-5	Create and punctuate more sophisticated sentences by using sentence combining techniques where applicable.	F3c
06-5	Use specific words and details.	F3c
07-5	Eliminate slang and jargon.	F3c
08-5	Define unfamiliar terms for the audience.	F3c
09-5	Correct misplaced phrases and clauses.	F3c
10-5	Punctuate the final draft correctly.	F3c

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		NCEO CODE
11-5	Paragraph the final draft appropriately.	F3c
12-5	Use transitions between paragraphs.	F3c
13-5	Use correct capitalization.	F3c
14-5	Use standard spelling.	F3c
15-5	Eliminate inconsistencies in tense.	F3c
16-5	Correct faulty parallelism.	F3c
17-5	Eliminate redundancies.	F3c
18-5	Share the final draft.	F3c
	DRAMA EXPERIENCES	
4080-04	The students will explore the elements of a story (exposition, development, conflict, climax, denouement, setting, character motivation, etc.) when choosing literature to dramatize (listening, speaking, reading, critical thinking, interpreting).	F4b
01	Share their own opinions, reactions, and impressions of the literature.	F4b
02	Read short stories for discussion of the principles of drama (i.e., exposition, development, conflict, etc.)	F4b
03	Choose a story for dramatic presentation.	F4b
04	Present stories in practice situations.	F4b
05	Receive peer evaluation through response groups.	F4b
06	Make appropriate changes for improvement.	F4b
07	Present finished story to audience.	F4b
4080-05	The students will explore and demonstrate their own interpretations of poetry (listening, speaking, reading, critical thinking, conversing, performing).	F4b
01	Read poetry for discussion of the principles of oral interpretation (i.e., voice quality, variation in presentation, eye contact, stance, etc.)	F4b
02	Select poems for presentation.	F4b
03	Interpret poetry for response groups for peer evaluation.	F4b
04	Make appropriate changes for improvement.	F4b
05	Present rehearsed interpretation for an audience.	F4b
4080-06	The students will participate in role-playing to explore drama concepts and skills that apply to real-life problems (listening, speaking, reading, critical thinking, conversing).	F4b
01	Choose a real-life issue to investigate.	F4b
02	Research the chosen topic using the library media specialist/teacher as a resource.	F4b
03	Evaluate the pros and cons of a real-life situation through careful examination of an issue, attentive listening to a partner, etc.	F4b
04	Role-play in pairs, taking opposite positions on issues.	F4b
05	Participate in peer response group evaluation for feedback on the level of attentiveness of each partner and their ability to respond to the arguments of a partner.	F4b, G4b
06	Take the opposite positions on those same topics to learn the principles of refutation.	F4b
4080-07	The students will learn to evaluate mass media presentations (listening, speaking, reading, critical thinking, conversing).	F4
01	Demonstrate an understanding of the negative aspects of mass media as well as the positive aspects.	F4
02	Understand how the standards of good drama apply to the materials seen on television.	F4
03	Understand the difference between media fantasy and reality.	F4
04	Show an understanding of the consequences of media violence and brutality.	F4

Virginia

Document Utilized

Outcome Accountability Program: 1994 Interpretive Guide to Reports (1994)

Background

Current revision to the state content standards began in April 1994. The state has developed standards of learning in English/language arts, mathematics, science, and social studies. Standards are organized by grade levels until 8th grade. In high school, the standards are not grade-specific; they are identified by courses. It has not been determined whether the standards will be mandatory for districts. Standards will, however, be tied to graduation requirements and state assessments.

Virginia

[illegible] PROJECT	NCES CODE
1. Community and Student Information: Students Speaking English as a Second Language	F4a
Definition: Percent of students in the division identified as being Limited English Proficient during the 1992-93 school year.	F4a
2. Community and Student Information: Educational Level of the Community.	no match
Definition: Percent of adults in the locality who are high school graduates as reported by the 1990 Census.	no match
3. Community and Student Information: Family Poverty Level in the Community.	no match
Definition: Percent of families in the locality below the federal poverty level as reported by the 1990 U.S. Census.	no match
4. Community and Student Information: Community Income	no match
Definition: 1991 Median Adjusted Gross Income in the locality.	no match
5. Community and Student Information: Public School Membership.	no match
Definition: Average number of students enrolled in the school division during the 1992-93 school year (Average Daily Membership)	no match
6. Community and Student Information: Student's Socioeconomic Status	no match
Definition: Percent of students in the division with approved applications for free or reduced price lunch during the 1992-93 school year.	no match
7. Community and Student Information: Local Ability-to-Pay for Education.	no match
Definition: The composite Index of Local Ability-to-Pay is a weighted, division-level measure that includes local adjusted gross income, local sales tax, local value of real property, and reflects both the student population and the local population.	
OBJECTIVE 1: PREPARING STUDENTS FOR COLLEGE	
3. Indicator Name: Taking Foreign Language	no match
Definition: Percent of 8th grade students who took a foreign language prior to the 9th grade.	no match
4. Indicator Name: Taking Algebra 1	no match
Definition: Percent of 8th grade students who took Algebra 1 or Algebra 1, Part 1 prior to the 9th grade.	no match
8. Indicator Name: 8th Grade Standardized Test Scores.	no match
Definition: Percent of 8th grade students who took the Virginia State Assessment Program standardized tests under standard conditions whose composite scores were above the national 75th percentile.	no match

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Virginia

	NCEO CODE
OBJECTIVE 3: INCREASING THE GRADUATION RATE	
2. Indicator Name: Dropout Rate.	A1
Definition: Percent of students in grades 7-12 who dropped out of school.	A1
3. Indicator Name: Minority Dropout Rate.	A1
Definition: Percent of minority students in grades 7-12 who dropped out of school.	A1
4. Indicator Name: Attendance.	A1a
Definition: Percent of students in grades K-12 who were absent 10 days or less from school.	A1a
6. Indicator Name: 8th Grade Standardized Test Scores.	no match
Definition: Percent of 8th grade students who took the Virginia State Assessment Program standardized tests under standard conditions whose composite scores were above the national 25th percentile.	no match
8. Indicator Name: Over Age 8th Grade Students.	no match
Definition: Percent of 8th grade students who were 15 or more years of age.	no match
OBJECTIVE 4: INCREASING SPECIAL EDUCATION STUDENTS' LIVING SKILLS AND OPPORTUNITIES.	
1. Indicator Name: Attendance.	A1a
Definition: Percent of special education students who were absent 10 days or less from school.	A1a
2. Indicator Name: Dropout Rate.	A1
Definition: Percent of special education students in grades 7-12 (including ungraded students) who dropped out of school.	A1
OBJECTIVE 6: EDUCATING MIDDLE SCHOOL STUDENTS	
1. Indicator Name: Attendance	A1a
Definition: Percent of students in grades 6-8 who were absent 10 days or less from school.	A1a
2. Indicator Name: Taking Foreign Language.	no match
Definition: Percent of 8th grade student who took a foreign language prior to the 9th grade.	no match
3. Indicator Name: Minority Students Taking Foreign Language.	no match
Definition: Percent of minority 8th grade students who took foreign language prior to the 9th grade.	no match
4. Indicator Name: Taking Algebra 1	no match
Definition: Percent of 8th grade students who took Algebra 1 or Algebra 1, Part 1 prior to the 9th grade.	no match
5. Indicator Name: Minority Students Taking Algebra 1.	no match
Definition: Percent of minority 8th grade students who took Algebra 1 or Algebra 1, Part 1 prior to the 9th grade.	no match
6. Indicator Name: 8th Grade Standardized Test Scores above the 75th Percentile.	no match
Definition: Percent of 8th grade students who took the Virginia State Assessment Program standardized tests under standard conditions whose composite scores were above the national 75th percentile.	no match
7. Indicator Name: 8th Grade Standardized Tests Scores above Median.	no match
Definition: Percent of 8th grade students who took the Virginia State Assessment Program standardized test under standard conditions whose composite scores were above the national 50th percentile.	no match
8. Indicator Name: Physical Fitness Test.	C3a
Definition: Percent of 6th, 7th, and 8th grade students who passed all four spring physical fitness tests.	C3a
(Percent of 6th, 7th, and 8th grade students enrolled in Physical Education who took all four physical fitness tests)	C3a

Washington

Documents Utilized

Subgroup on Learning, Outcomes, and Assessment- - Recommendations to the Governor's Council on Education Reform and Funding (June 1992)
Ready to Learn - Final Recommendations (June 1992)

Background

The Subgroup on Learning, Outcomes, and Assessment, as part of the Governor's Council on Education Reform and Funding, developed a set of recommendations for the Legislature in 1992 that included the specification of a set of student learning goals and demonstrated outcomes. The state is developing content standards in two phases. Goal 1 includes the basics of communication, mathematics, reading, and writing. Goal 2 includes the arts, health and fitness, science, and social studies. Standards describe student learning at three levels that roughly coincide with elementary, middle, and high school. Developmental indicators are used to illustrate mastery. Prototype tasks and sample scoring guides will accompany the standards. The standards will be mandatory for districts by the year 2000 and will be tied to statewide assessments.

Washington

STUDENT LEARNING GOALS	NCEO CODE
The ultimate goal for Washington's K-12 education system is to enable people to be responsible citizens, to contribute to their own economic well-being and to that of their families and communities and to enjoy productive and satisfying lives. To these ends, schools, together with parents and communities, will help students develop the knowledge, skills and attitudes essential to:	
GOAL 1: Communicate effectively and responsibly in a variety of ways and settings.	F1a
Demonstrated Outcomes	
Each Student:	
A. gathers information and ideas through listening, observing, participating and reading.	A2a, F1a, F3b
B. organizes, analyzes, and applies information and ideas.	F2a
C. expresses information, ideas and emotions by using written and oral language and the arts, and by working with materials.	F1a, F3c, F4b
D. uses appropriate technology to gather, process and express information and ideas.	F5a
GOAL 2: Know and apply the core concepts and principles of mathematics; social, physical and life sciences; arts: humanities; and healthful living.	C1, F3a, F4a, F4b
Demonstrated Outcomes	
Each Student understands and uses:	
A. the mathematical principles, structures and concepts.	F3a
B. the scientific principles, structures and concepts.	F4a
C. the principles, structures and concepts of social, economic and political systems.	F4a
D. the principles of democratic living, including an awareness of cultural diversity.	E1a, G3b
E. the principles, structures and concepts of the arts and humanities.	F4b
F. the elements of healthful living.	C1, C2
GOAL 3: Think critically and creatively and integrate experience and knowledge to form reasoned judgements and solve problems.	F2a

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Washington

		NCEO CODE
	Demonstrated Outcomes	
	Each Student Can:	
A.	engage and apply problem solving by:	F2a
1.	identifying problems	F2a
2.	formulating alternative solutions and consequences.	F2a
3.	analyzing and evaluating information necessary to solve problems.	F2a
4.	applying analysis in making informed choices based on information and consequences.	F2a
5.	selecting and applying appropriate technology to solve problems.	F2a
B.	integrate information, ideas, materials and equipment form multiple disciplines to solve problems.	F2a
C.	make connections between what is already known and new fields of knowledge.	F2a
D.	make connections that have personal relevance and meaning.	F2a
GOAL 4:	Function as caring and responsible individuals and contributing members of families, work groups, and communities.	A2a, A2e, D1a
	Demonstrated Outcomes	
	Each Student Demonstrates:	
A.	personal attributes of:	
1.	honest and ethical behavior	E
2.	self-directed life long learning	F
3.	adaptability and flexibility in the face of the known and unknown	F
4.	resourcefulness and creativity	F
5.	self-esteem and self-discipline	F1c, G3a
6.	interpersonal and leadership skills	G4
B.	citizenship through:	
1.	acceptance of rights and responsibilities of self and others	E1a, G3a
2.	civic participation and community involvement	A2e, E3b, E3c
3.	a multi-cultural and world view	F
C.	employability through:	
1.	ability to seek and obtain employment	A2f
2.	motivation and persistence	D3e
3.	positive work habits	F
4.	productive team member skills	G4b

West Virginia

Document Utilized

West Virginia Programs of Study: Instructional Goals and Objectives--Early Childhood Education K-4 (July 1992)
West Virginia Programs of Study: Instructional Goals and Objectives--Middle Childhood Education 5-8 (July 1992)

Background

West Virginia educational policy articulates instructional goals (developed at K-4, 5-8, and 9-12) that are mandatory. Instructional objectives, developed for each grade from K-12 are recommended. These programs of study describe student learning in the following areas: art, driver's education, English/language arts, foreign languages, health, mathematics, music, physical education, safety, science, and social studies.

West Virginia

INSTRUCTIONAL GOALS AND OBJECTIVES	NCEO CODE
ART PROGRAM OF STUDY	
AREA OF STUDY: GENERAL ART At this level learners identify and use analogous color schemes, non-objective and abstract shapes and forms, elements and principles of design. Learners should be guided in the processes of painting, drawing, architectural rendering, lettering, printmaking, crafts and sculpture to develop creative skills, motor skills, art appreciation and making decisions about art. The Learner Will:	
1. Identify split complementary color schemes.	F4b
2. Create art using split complementary color schemes.	F4b
3. Recognize the use of warm or cool, monochromatic, complementary, split complementary, triadic and analogous color schemes.	F4b
4. Recognize the use of organic, geometric, non-objective and abstract shapes and forms.	F2a, F4b
5. Analyze art in terms of elements and principles of design.	F4b
6. Create art emphasizing at least three elements and three principles of design.	F4b
7. Create drawings from live models and/or still life objects.	F4b
8. Evaluate art works from specific historical periods in terms of aesthetic and sensory qualities.	F2a, F4b
9. Analyze and discuss specific styles of art, e.g., Cubism, Impressionism, Realism.	F2a, F4b
10. Create art representative of a specific style.	F4b
11. Describe differences in art media.	F4b
12. Describe differences in techniques within at least two media, e.g., painting: water color, oil, acrylic, egg tempera; sculpture: stone, wood, metal, clay, wire; drawing: pencil, ink, charcoal, oil pastels.	F4b
13. Identify various careers in art.	A2f, F4b
14. Identify at least six artists and a work by each.	F4b
15. Select, title and prepare his/her work(s) for display.	F4b
16. Discuss (verbally or in writing) an art exhibit.	F4b
ENGLISH/LANGUAGE ARTS PROGRAM OF STUDY	
MIDDLE CHILDHOOD EDUCATION PROGRAM OF STUDY The middle childhood education program of study continues the integrated approach to the English language arts as the learner grows in reading, writing, spelling, handwriting, speaking, listening, and viewing. English language arts experiences at this level should	

West Virginia

		NCEO CODE
	move the student from dependent learning to independent learning through interactive, collaborative language experiences. At this level, the student is also moving from a social use of language to the use of language as a tool.	
8.0	**INSTRUCTIONAL GOALS**	
8.1	Reading: Students will acquire and use the reading strategies necessary to achieve personal ambitions and to succeed in society.	F3b
8.2	Writing: Students will master writing strategies that provide them with the decision-making skills to address specific audiences and purposes.	F3c
8.3	Spelling: Students will spell and pronounce words correctly.	F4a
8.4	Handwriting: Students will write legibly.	F3c
8.5	Speaking: Students will participate in a variety of speaking opportunities that are integrated into learning activities and that allow students to interact interpersonally.	A2a, F1a, G4
8.6	Listening: Students will develop listening strategies for their personal, academic, and occupational lives.	F1a
8.7	Viewing: Students will be critical viewers of media.	F2a, F4b
9.0	**READING OBJECTIVES (READING, LITERATURE)**	
9.1	Students will demonstrate comprehension through the critical thinking skills of summarizing, interpreting, evaluating, critiquing, and analyzing what is read.	F2a, F3b
9.2	Students will read and respond to a wide variety of literary genres.	F3b, F4b
9.3	Students will read for literary experience, pleasure, information, task performance, and problem solving.	F2a, F3b, F4b
9.4	Students will develop lifelong reading habits.	F3b
9.5	Students will use reading strategies across the curriculum.	F3b
10.0	**WRITING OBJECTIVES (COMPOSITION, USAGE, MECHANICS, GRAMMAR, JOURNALISM)**	
10.1	Students will develop a writing process that allows them to write confidently, fluently, and successfully.	F3c
10.2	Students will use prewriting and drafting strategies (i.e., invented spelling) to generate topics and plan approaches to writing tasks.	F3c
10.3	Students will use writing strategies to address specific writing purposes, such as research, creative, journalistic, and essay.	F3c
10.4	Students will use writing strategies to write for audiences, including peers, teachers, and employers.	F3c
10.5	Students will use revision strategies.	F3c
10.6	Students will edit their writing as well as the writing of others to delete or correct errors in organization, content, usage, mechanics, and spelling.	F3c
10.7	Students will become familiar with different aspects of publishing.	F4
10.8	Students will critique, model, and experiment with different writing styles.	F4
10.9	Students will write for pleasure and enjoyment (i.e., journals, friendly letters)	F3c
10.10	Students will select and identify examples of specific parts of speech, phrases, and clauses from their writing.	F3c, F4a
10.11	Students will write and identify different types of sentences, paragraphs, and essays.	F3c, F4a
10.12	Students will write and use writing as an expression of learning across the curriculum.	F3c
11.0	**SPELLING OBJECTIVES**	
11.1	Students will acquire a written and oral vocabulary from a wide variety of instructional sources and activities.	F4a
11.2	Students will demonstrate accurate spelling and pronunciation in their written and oral communication across the curriculum.	F1a, F3c, F4a
12.0	**HANDWRITING OBJECTIVES**	
12.1	Students will write legibly in manuscript and cursive forms.	F3c

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12.2	Students will use proper keyboarding techniques in schools and county school districts where the technology and educational resources permit.	F3c, F5a
12.3	Students will follow a teacher, school, or county developed style sheet, or a manuscript format (i.e., MLA Style Sheet) to prepare written communications.	F3c, F4a
13.0	**SPEAKING OBJECTIVES (FORMAL, INFORMAL, COMPETITIVE)**	
13.1	Students will participate in a variety of speaking activities, e.g., oral interpretation, choral reading, argumentation, debate, and discussion.	A2a, F1a, F3b, F4
13.2	Students will use conferencing skills to achieve academic goals.	G4b
13.3	Students will identify and correct usage errors in oral communications.	F1a
13.4	Students will exhibit appropriate speaking etiquette, e.g., speaking in turn, using proper telephone skills, demonstrating interpersonal communication.	F1a
13.5	Students will use public speaking strategies to prepare formal and informal speaking presentations across the curriculum.	F1a
14.0	**LISTENING OBJECTIVES.**	
14.1	Students will listen to oral communications using proper etiquette.	F1a
14.2	Students will listen to oral communications and retell in either oral or written form.	F1a
14.3	Students will listen to oral instructions and successfully complete the task.	F1a
14.4	Students will listen to oral communications and critique, evaluate, and summarize their contents across the curriculum.	F1a, F2a
15.0	**VIEWING OBJECTIVES (DRAMA, THEATER, FILM, TELEVISION, COMPUTER TECHNOLOGY)**	
15.1	Students will view media for specific purposes, such as performance, pleasure, information, communication.	F4b
15.2	Students will observe, critique, evaluate, and analyze what they view from different perspectives.	F2a, F4b
15.3	Students will differentiate types of information present in media format (propaganda, bias)	F4
15.4	Students will exhibit appropriate audience etiquette in a variety of viewing experiences.	G3a
15.5	Students will use film, television, video, and computers to reinforce, and enhance classroom instruction across the curriculum.	F4, F5a
FOREIGN LANGUAGE PROGRAM OF STUDY		
	INSTRUCTIONAL OBJECTIVES, AREA OF STUDY: FRENCH, LEVEL I The Learner Will:	
	LISTENING COMPREHENSION	
1.	Demonstrate recognition of the component parts of the French sound system including phonemes, intonations, stress and rhythm patterns, liaison, and elision.	F4a
2.	Identify very basic structure signals such as masculine/feminine (francais, francaise).	F4a
3.	Guess the meanings of words from verbal, non-verbal, and contextual clues.	F4a
4.	Respond appropriately to simple commands, questions, greetings, statements, and comments given at a slow pace by an educated speaker.	F4a
	SPEAKING	
5.	Reproduce the sound system with reasonable accuracy.	F4a
6.	Express simple ideas orally including greetings, naming, asking and responding to basic questions (present tense)	F4a
	READING	
7.	Pronounce written words, phrases, and sentences, with reasonable accuracy.	F4a
8.	Demonstrate the ability to guess the meaning of unfamiliar words by using appropriate contextual clues such as cognates, familiar terms, word parts, and word order.	F4a
9.	Demonstrate comprehension of the written word including authentic printed materials and short selections containing high-frequency vocabulary and structures.	F4a

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	WRITING	
10.	Copy words and sentences accurately.	F4a
11.	Take dictation of familiar material.	F4a
12.	Spell high-frequency words accurately.	F4a
13.	Write short notes or messages of a personal nature.	F4a
14.	Write simple sentences and paragraphs using memorized or very familiar materials.	F4a
	CULTURE	
15.	Demonstrate knowledge of the influence of the French language on English.	F4a
16.	Demonstrate awareness that different cultures attach different connotations to commonly used words and phrases.	F4a
17.	Begin to compare and contrast francophone and American cultures.	F4a
18.	Demonstrate knowledge of the basic geographical features of France and be able to name several French-speaking areas.	F4a
19.	Identify or discuss some contributions of French-speaking peoples to the world.	F4a
20.	Demonstrate knowledge of non-verbal signals.	F4a
21.	Identify career options involving French language skills.	F4a
	LEVEL II	
	LISTENING	
1.	Demonstrate the ability to discriminate among increasingly subtle phonemic distinctions such as "blond--blanc."	F4a
2.	Demonstrate the ability to identify increasingly complex structure signals e.g. (distinction between /upside down e/ and /e/ in "se levait" and "s'est levé") and intonation patterns.	F4a
3.	Demonstrate the ability to respond appropriately to increasingly longer statements, questions, and commands communicated at a moderate pace by an educated speaker.	F4a
	SPEAKING	
4.	Orally recombine previously acquired vocabulary and structures by expressing ideas and asking questions on familiar topics (present, past, and future tenses).	F4a
5.	Demonstrate greater accuracy in the pronunciation of words, phrases, and sentences with appropriate intonation, stress, and rhythm.	F4a
	READING	
6.	Demonstrate understanding of main ideas, facts, and narratives in textbooks, graded readers, and simple authentic materials dealing with everyday matters.	F4a
7.	Skim and scan authentic and prepared materials for enjoyment.	F4a
	WRITING	
8.	Write form dictation recombined familiar materials.	F4a
9.	Write short compositions on familiar topics.	F4a
	CULTURE	
10.	Develop knowledge and awareness of major historical events and geographical aspects of France and francophone cultures.	F4a
11.	Continue to identify patterns of daily living, values, and attitudes in order to function appropriately in French and francophone cultures.	F4a
12.	Identify great French and francophone men and women and their contributions in science, the arts, and politics.	F4a
13.	Identify career options involving French language skills.	F4a
14.	Choose basic expressions of courtesy appropriate to the social situation.	F4a
	LEVEL III At Level III and above it is recommended that French be used as the primary means of oral communication in the classroom. The Learner Will:	
	LISTENING COMPREHENSION	
1.	Identify main ideas and some details contained in short explanations or narratives.	F4a
2.	Show comprehension of conversations dealing with familiar topics.	F4a
	SPEAKING	
3.	Express basic needs in simple survival/travel/classroom situations and elicit practical information.	F4a

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4. Initiate, sustain, and conclude face-to-face conversations on familiar topics.	F4a
5. State and support preferences and opinions on concrete topics of interest.	F4a
READING	
6. Read aloud with increasing speed, accuracy, clarity, and expression.	F4a
7. Expand reading comprehension skills by inferring meaning from unfamiliar authentic materials, graded materials, and selected literary passages.	F4a
WRITING	
8. Take dictation at an advanced level.	F4a
9. Express original ideas in various types of writing including dialogue, letters, poetry, and short narratives.	F4a
CULTURE	
10. Identify major events and important individuals in French or francophone history.	F4a
11. Demonstrate an awareness of regional an national cultural differences in customs and traditions in France and the francophone world.	F4a
12. Discuss current events and social trends.	F4a
13. Identify individuals, major works, and movements of French and francophone creative arts.	F4a
14. Demonstrate intellectual curiosity about France and francophone cultures and develop empathy toward their people.	F4a
LEVEL IV The Learner Will:	
LISTENING COMPREHENSION	
1. Identify the main idea expressed by an educated native speaking at moderate rate in newscasts, weather reports, etc.	F4a
2. Identify the main ideas and some details from conversations on a range of topics.	F4a
SPEAKING	
3. Narrate present, past, and future events in areas of personal interest with reasonable accuracy.	F4a
4. Initiate spontaneous conversations lasting several minutes.	F4a
5. Express basic needs in simple survival/travel/classroom situations and elicit practical information in greater detail (e.g., requesting a table for two in a quiet corner).	F4a
6. Demonstrate ability to overcome limitations by using an alternate word or phrase.	F4a
READING	
7. Read an analyze authentic materials including literary texts.	F4a
8. Use contextual clues, structure signals and previously learned material to deduce meaning in longer unfamiliar passages.	F4a
WRITING	
9. Take dictation at an advanced level.	F4a
10. Write short t essays using a variety of tenses.	F4a
11. Demonstrate ability to overcome limitations by using alternate words or phrases.	F4a
12. Continue expressive writing of various types.	F4a
CULTURE	
13. Read independently French works and authentic materials of some length.	F4a
14. Continue to identify major events and important individuals in French or francophone history.	F4a
15. Identify cultural concepts when they occur in oral, written, or visual authentic materials.	F4a
16. Make culturally appropriate responses in selected francophone situations such a tipping, etc.	F4a
INSTRUCTIONAL OBJECTIVES, AREA OF STUDY: SPANISH LEVEL I The Learner Will:	
LISTENING COMPREHENSION	
1. Accurately identify vowel and consonant sounds.	F4a
2. Recognize examples of intonation, stress, rhythm patterns, and the usage of liaison.	F4a
3. Respond appropriately to teacher talk and pre-recorded materials.	F4a
4. React appropriately to classroom instructions and directions.	F4a
5. Respond to words and phrases in face-to-face conversations dealing with learned content areas.	F4a
6. Identify main ideas and key words in familiar materials.	F4a

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	SPEAKING	
7.	Reproduce the sound system with reasonable accuracy including intonation, stress, rhythm patterns, and the use of liaison in meaningful context.	F4a
8.	Name/identify people, places, objects, etc.	F4a
9.	Give limited response to basic question.	F4a
10.	Obtain basic information such as name, date, etc.	F4a
11.	Express greetings, descriptions, agreement, disagreement, minimal courtesy, etc.	F4a
12.	Relate the sounds of the language to the printed word.	F4a
	READING	
13.	Derive meaning from short selections containing high-frequency structures dealing with everyday matters.	F4a
14.	Select main ideas and key words from familiar material.	F4a
15.	Read familiar material orally approximating correct pronunciation and intonation.	F4a
16.	Interpret symbols of punctuation in the writing system.	F4a
	WRITING	
17.	Copy and take dictation of basic words and simple sentences.	F4a
18.	Write familiar material correctly using spelling, capitalization, and punctuation conventions.	F4a
19.	Write simple sentences and controlled paragraphs using familiar vocabulary, grammar and syntax.	F4a
20.	Supply personal data on simple information forms.	F4a
	CULTURE	
21.	Demonstrate awareness of the contribution of the Spanish language to the English language.	F4a
22.	Recognize that within the Hispanic world there exist differences in pronunciation and intonation patterns.	F4a
23.	Demonstrate an awareness that different cultures attach different connotations and denotations for commonly used words/phrases.	F4a
24.	Recognize the increasing Hispanic presence and influence in the United States today.	F4a
25.	Recognize the diversity among the cultures of Hispanic countries and the United States.	F4a
26.	Locate the Hispanic countries, capitals and primary geographic features.	F4a
27.	Identify a few outstanding contributions of Hispanic peoples to the cultural world (art, music, literature, and popular culture).	F4a
28.	Identify the attributes of cultures, races and languages other than his own.	F4a
29.	Recognize career opportunities in which the ability to speak Spanish is advantageous.	F4a
	LEVEL II The Learner Will:	
	LISTENING COMPREHENSION	
1.	Refine listening discrimination skills learned in Spanish I.	F4a
2.	Respond to sentence length utterances that consist of recombinations of learned elements in a limited number of vocabulary areas.	F4a
3.	Demonstrate comprehension of conversations on learned topics.	F4a
4.	Demonstrate comprehension of speech containing high-frequency structures and vocabulary in everyday situations.	F4a
	SPEAKING	
5.	Participate in directed conversations dealing with familiar topics.	F4a
6.	Ask and answer information questions.	F4a
7.	Satisfy basic personal needs in simple life situations.	F4a
8.	Express ideas on familiar topics using high-frequency structures and basic vocabulary.	F4a
9.	Summarize events related to daily life with moderate ease.	
	READING	
10.	Determine main ideas and some supporting detail in simple materials dealing with basic personal and social needs.	F4a
11.	Comprehend learned materials and their recombinations.	F4a
12.	Show comprehension of messages, questions and short notes on everyday topics.	F4a
13.	Deduce meaning of unfamiliar materials in context by using word attack skills.	F4a

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	WRITING	
14.	Write compound sentences employing correct vocabulary, grammar, and syntax.	F4a
15.	Write short paragraphs on assigned familiar topics using controlled vocabulary, correct grammar, and syntax appropriate to level.	F4a
16.	Write short messages, post cards, and letters.	F4a
	CULTURE	
17.	Demonstrate awareness of the contribution of the Spanish language on the English language.	F4a
18.	Recognize that within the Hispanic world there exist differences in pronunciation and intonation patterns.	F4a
19.	Demonstrate an awareness that different cultures attach different connotations and denotations for commonly used words/phrases.	F4a
20.	Recognize the increasing Hispanic presence and influence in the United States today.	F4a
21.	Recognize the diversity among the cultures of Hispanic countries and the United States.	F4a
22.	Locate the Hispanic countries, capitals and primary geographic features.	F4a
23.	Identify a few outstanding contributions of Hispanic peoples to the cultural world (art, music, literature, and popular culture).	F4a
24.	Identify the attributes of cultures, races and languages other than his own.	F4a
25.	Recognize career opportunities in which the ability to speak Spanish is advantageous.	F4a
	LEVEL III The Learner Will:	
	LISTENING COMPREHENSION	
	At level III and above it is recommended that Spanish be used as the primary means of oral communication in the classroom.	
1.	Respond to longer word sequences and more complex structures.	F4a
2.	Demonstrate understanding of explanations and conversations of unfamiliar topics.	F4a
3.	Determine main ideas in explanations and narratives of moderate length.	F4a
4.	Show comprehension of taped or live native speech delivered by native persons familiar with student's level of ability.	F4a
	SPEAKING	
5.	Use Spanish with reasonable accuracy as the primary means of oral communication in the classroom.	F4a
6.	Sustain a conversation dealing with familiar topics.	F4a
7.	Communicate needs to elicit practical information from native or non-native speakers to satisfy basic travel/survival needs.	F4a
8.	Retell familiar materials.	F4a
9.	Use alternate means of communicating an idea.	F4a
	READING	
10.	Infer meaning from adapted short stories, poems and abridged works.	F4a
11.	Show understanding authentic materials such as newspapers, magazines, signs, and correspondence.	F4a
12.	React to the content of the reading material through expression of opinions.	F4a
	WRITING	
13.	Write complex sentences using correct vocabulary, grammar and syntax employing a variety of tenses.	F4a
14.	Write paragraphs expressing original ideas and topics of interest.	F4a
15.	Take notes in the target language with teacher guidance.	F4a
16.	Write compositions on assigned topics.	F4a
	CULTURE	
17.	Recognize societal factors that influence the way people speak and behave.	F4a
18.	Demonstrate in-depth knowledge of creative forces in art, literature, music, and their contributions to their own society and the world at large.	F4a
19.	Place major Hispanic events and or individuals in historical context.	F4a
20.	Recognize the influence of regional folklore in the traditions of Hispanic peoples.	F4a
21.	Recognize the economic and political systems of Spain and other Spanish-speaking countries and the impact of these systems on current events.	F4a

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22.	Research career opportunities in which comprehensive knowledge of Spanish is advantageous to personal career goals.	F4a
	LEVEL IV The Learner Will:	
	LISTENING COMPREHENSION	
1.	Demonstrate comprehension of ideas and details in conversations on concrete or abstract ideas	F4a
2.	Function with ease in a class conducted primarily in Spanish.	F4a
	SPEAKING	
3.	Use Spanish as the primary means of oral communication in the classroom.	F4a
4.	Narrate present, past and future events in areas of personal interest.	F4a
5.	Demonstrate spontaneity in language production to satisfy survival needs and social demands.	F4a
6.	Integrate different structures and relevant vocabulary when speaking on assigned topics.	F4a
7.	Circumlocute with the closet Spanish equivalent when unable to express an idea.	F4a
8.	Initiate, sustain and bring to closure a wide variety of communicative tasks, handling difficulties in unexpected events.	F4a
	READING	
9.	Read and understand content and intent of cultural references in authentic materials.	F4a
10.	Comprehend with teacher guidance factual information and main ideas in selected unabridged literary material.	F4a
	WRITING	
11.	Accurately express ideas and opinions by employing advanced vocabulary, grammar and syntax using a variety of tenses.	F4a
12.	Take notes in target language.	F4a
13.	Analyze and interpret authentic materials by writing cohesive summaries.	F4a
	CULTURE	
14.	Recognize societal factors that influence the way people speak and behave.	F4a
15.	Demonstrate in-depth knowledge of creative forces in art, literature, music, and their contributions to their own society and the world at large.	F4a
16.	Place major Hispanic events and or individuals in historical context.	F4a
17.	Recognize the influence of regional folklore in the traditions of Hispanic peoples.	F4a
18.	Recognize the economic and government systems of Spain and other Spanish-speaking countries and the impact of these systems on current events.	F4a
19.	Research career opportunities in which comprehensive knowledge of Spanish is advantageous to personal career goals.	F4a
	INSTRUCTIONAL OBJECTIVES, AREA OF STUDY: LATIN	
	I. READING COMPREHENSION	
	The Learner Will:	
	A. Oral Reading	
	PRONUNCIATION	
1.	Reproduce the sounds of Latin.	F4a
2.	Relate the sounds of the language to the printed word.	F4a
	INTONATION/METER	
3.	Read aloud with emphasis, intonation, and rhythm appropriate to form and meaning.	F4a
	B. Vocabulary	
4.	Develop an active vocabulary of common Latin words.	F4a
5.	Derive meaning of infrequently used vocabulary words from context.	F4a
6.	Recognize common Latin roots, prefixes, and suffixes.	F4a
	C. Structure	
7.	Understand that Latin world order is different from English word order.	F4a
8.	Understand that Latin meaning is shown by endings rather than by word order.	F4a
9.	Read and comprehend Latin sentences through phrasing in natural word order.	F4a
	D. Verification of Comprehension	
10.	Identify the main ideas of a Latin passage.	F4a

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11. Discuss the main ideas of a Latin passage.	F4a
12. Translate a passage from Latin to English.	F4a
E. Literary Analysis	
13. Identify literary devices.	F4a
14. Analyze the effect of identified literary devices.	F4a
15. Discuss the effect of other literary elements on meaning.	F4a
II. CULTURAL/HUMANITIES	
The Learner Will:	
A. Language	
16. Recognize that language itself is an expression of culture.	F4a
17. Understand the role of Latin in the development of other languages.	F4a
B. Geography	
18. Identify the basic geographical feature of the Mediterranean area.	F4a
C. History and Ancient Chronology	
19. Identify the three major periods in Roman history.	F4a
20. Develop a sense of history by placing major events and important individuals in historical context.	F4a
D. Political/Economic System	
21. Describe the characteristics of the various political systems operative in Roman history and identify the major political figures of each.	F4a
22. Explain the effect of economics on the political system.	F4a
E. Value System	
23. Explain the interrelationship of religious, patriotic and family values.	F4a
24. Compare and contrast his/her own value system with ancient Roman ethical systems.	F4a
F. Lifestyles	
25. Compare and contrast ancient Roman and current American lifestyle.	F4a
26. Outline changes in the concept of social classes throughout Roman history.	F4a
G. Legend and Mythology	
27. Illustrate the influence of classical mythology on the arts and western civilization.	F4a
28. Distinguish between legend and historical fact.	F4a
III. LANGUAGE TRANSFERENCE	
The Learner Will:	
A. Cognates/Loan Words	
29. Identify words that are common to both Latin and English.	F4a
B. Word Derivation	
30. Derive meaning of English words from familiar Latin words.	F4a
31. Use common Latin roots, prefixes, and suffixes to derive meaning of English words.	F4a
C. Phrases and Abbreviations	
32. Define and use appropriately Latin phrases and abbreviations in English.	F4a
D. Structures	
33. Compare elements of Latin and English structure as a means to improve oral and written communication.	F4a
HEALTH PROGRAM OF STUDY	
MIDDLE CHILDHOOD EDUCATION	
The goal of the Health Education Program of Study in Middle Childhood Education is to prepare students with the skills necessary to make wise health decisions that promote a healthy lifestyle in the following areas: development and personal health, safety, mental health and relationships, consumer and environmental health, drug use prevention, disease prevention, nutrition and fitness. The local school district shall, therefore, provide multiple opportunities for students to:	
Know and practice healthful behaviors which can prevent the majority of lifestyles related,	C1, C2a, C2e

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diseases, injuries and loss of quality of life from illnesses such as AIDS, other sexually transmitted diseases, cardiovascular diseases, diabetes, cancer, etc.	
Identify and select appropriate health care resources.	C2c
Compare the functions and interrelationships of body systems and demonstrate understanding of the physical and emotional aspects of pubescence.	F4
Understand the reasons and demonstrate the ability to refuse pressures to engage in risk behaviors such as drug, tobacco or alcohol use, and sexual activity.	C2d
Demonstrate appropriate coping skills as needed in peer, social and family relationships to benefit mental health.	D1a, G1
Demonstrate how to avoid and report child abuse.	C2a, F4
MATHEMATICS PROGRAM OF STUDY, LEVEL 8	
Relations among fractions, decimals, ratios, proportions, and percents will be developed through the student's investigation of his/her environment, problem posing, and multistep problem solving. By using manipulations, appropriate measurement tools, and estimation, students will study the interrelations among length, area, and volume. Students will design and perform original probability experiments and prepare graphic representation of statistical data. Graphing in the Cartesian coordinate plane and elementary concepts of algebra are included. The Learner Will:	
Problem Solving	
1. Use appropriate problem-solving strategies such as acting it out; making a model; guessing and checking; drawing a picture; making a diagram, list, table, or graph; finding a pattern; using a simpler problem; working backwards; checking a solution; making an open sentence; and, generalizing a solution to investigate and understand mathematical content;	F2a, F3a
2. Collect and use data in problem solving;	F2a, F3a
3. Use a calculator and/or computer for multi-step problems when appropriate;	F3a, F5a
4. Use estimation and rounding to recognize reasonable results;	F3a
5. Formulate problems from situations within and outside mathematics;	F3a
6. Use manipulatives when appropriate in problem solving;	F3a
7. Investigate and solve nonroutine and open-ended problems;	F2a, F3a
8. Generalize solutions and strategies in problem solving situations;	F2a, F3a
9. Acquire confidence in using mathematics through frequent problem solving activities and projects including verifying results, interpreting solutions, and questioning whether a solution makes sense.	F2a, F3a, G2b
Communication	
10. Model situations using oral, written, concrete, pictorial, graphical, and algebraic methods;	F1a, F3a
11. Develop common understanding of mathematical ideas including the roles of definitions;	F3a
12. Discuss mathematical ideas, make conjectures and convincing arguments;	F3a
13. Use the skills of reading, listening, and viewing to interpret and evaluate mathematical ideas and symbols;	F1a, F3a, F3b
14. Reflect on and clarify his/her thinking by writing and discussing mathematical ideas and situations.	F1a, F3a, F3b
Reasoning	
15. Apply deductive and inductive reasoning;	F2a
16. Explain reasoning processes in his/her own words;	F1a
17. Understand and apply reasoning with proportions;	F3a
18. Make and evaluate mathematical conjectures and arguments;	F2a, F3a
19. Draw reasonable inferences and predictions form graphs and tables	F3a
Connections	
20. Use mathematical ideas to further understand other mathematical ideas;	F3a

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21. Use models to connect concrete and abstract mathematical concepts;	F3a
22. Describe relationships among measurement, computation, and geometric figures;	F3a
23. Apply mathematical thinking and modeling to solve problems that arise in other disciplines;	F3a
24. Describe the role of mathematics in our culture and society.	F3a
Number and Number Relationships	
25. Describe the meaning of fractions, decimals, percents, proportions, absolute value, integers, roots, exponents, absolute value, and scientific notation.	F3a
26. Demonstrate equivalence of fractions, decimals, and percents;	F3a
27. Compare and order fractions, mixed numbers, decimals, square roots, integers, and powers of numbers;	F3a
28. Read any real number;	F3a
29. Round numbers when appropriate;	F3a
30. Explore the meaning and application of pi;	F3a
31. Plot and identify points in the Cartesian coordinate plane;	F3a
32. Write a number in expanded form using exponents.	F3a
Number Systems and Number Theory	
33. Apply the commutative, associative, identity, and inverse properties for addition and multiplication of rational numbers;	F3a
34. Apply the distributive property;	F3a
35. Explore relationships among the basic arithmetic operations;	F3a
36. Apply the number theory concepts of prime factors and multiples in real-world mathematical problem situations.	F2a, F3a
Computation and Estimation	
37. Compute with whole numbers, fractions, decimals, percent, proportions, absolute value, integers, roots, exponents, and scientific notation;	F3a
38. Use a calculator or computer for addition, subtraction, multiplication, and division with numbers having more than three-digits and division with divisors of more than two-digits.	F3a, F5a
39. Select and use an appropriate process for computing from among mental arithmetic, paper-and-pencil, calculator, and computer methods;	F3a
40. Use computation and or estimation to solve problems;	F2a, F3a
41. Use estimation to check the reasonableness of results;	F3a
42. Select appropriate operations, strategies, and methods of solving a variety of application problems using real numbers, justifying the selection;	F3a
43. Demonstrate proficiency with number operations within the context of real-world problems;	F3a
44. Use order of operations to solve multi-step problems, using the calculator when appropriate.	F3a
Patterns and Functions	
45. Describe, represent, and apply relationships using tables, graphs and rules, formulas, and functions;	F3a
46. Use patterns, formulas, and functions to represent and solve problems;	F2a, F3a
47. Analyze relationships between two quantities to explain how a change in one affects the other;	F2a, F3a
48. Explore a wide variety of patterns.	F3a
Algebra	
49. Apply concepts of variable, expression, and equation;	F3a
50. Represent situations and number patterns with tables, graphs, verbal rules, and equations;	F3a
51. Apply algebraic concepts using physical models, data, and graphs;	F3a
52. Solve linear equations and inequalities;	F2a, F3a
53. Apply algebraic methods to solve a variety of real-world mathematical problems;	F2a, F3a
54. Apply nonlinear equation in a variety of problems solving situations;	F3a
55. Solve a pair of linear equations using graphing.	F3a

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		NCEO CODE
	Statistics and Probability	
56.	Use a calculator or computer for probability and statistical applications;	F3a, F5a
57.	Collect, organize and describe data;	F3a
58.	Construct, read and interpret tables, charts and graphs;	F3a
59.	Draw reasonable inferences and predictions from graphs, tables, and experiments;	F3a
60.	Determine experimental probabilities;	F3a
61.	Use a probability model to compare experimental results with mathematical expectations;	F3a
62.	Find the mean, mode, median, and range of a set of data;	F3a
63.	Describe the use of statistics and probability as a powerful method of decision making in the real world;	F3a
64.	Apply the Fundamental Counting Principle.	F3a
	Geometry	
65.	Describe, compare, and classify plane and solid geometric figures;	F3a
66.	Represent and solve problems using geometric models;	F2a, F3a
67.	Understand and apply geometric properties and relationships;	F3a
68.	Extend applications of transformations to include stretchers and shrinkers;	F3a
69.	Examine geometry as a means of describing the physical world;	F3a
70.	Graph equations in the Cartesian plane;	F3a
71.	Explore line and point symmetry using various methods;	F3a
72.	Inscribe and circumscribe regular polygons;	F3a
73.	Apply the Pythagorean theorem;	F3a
74.	Construct parallel and perpendicular lines;	F3a
75.	Solve problems using concepts of similarity and congruence.	F2a, F3a
	Measurement	
76.	Estimate, measure, and use measurements to describe and compare physical objects and examine the reasonableness of the results;	F3a
77.	Select appropriate units and tools, including different types of meters (e.g., water meter, volt meter) for measuring to designated degrees of precision;	F3a
78.	Apply the concepts of perimeter, area, surface area, volume, angle measure, capacity, weight/mass, time, and temperature;	F3a
79.	Develop and apply formulas and procedures for determining measures to solve problems;	F3a
80.	Measure perimeter, area, surface area, and volume of plane and solid shapes;	F3a
81.	Apply the concepts of rates and derived measurements.	F3a
	MUSIC PROGRAM OF STUDY, MIDDLE CHILDHOOD EDUCATION, GRADES 5-8	
	AREA OF STUDY: CLASSROOM/GENERAL MUSIC, LEVEL 8	
	The Learner Will:	
1.	Identify the key of musical excerpts written in C, F, B flat, E flat, G, D and A major.	F4b
2.	Improvise four or more measures of music.	F4b
3.	Perform melodic minor melodies.	F4b
4.	Perform modal melodies.	F4b
5.	Select chords to harmonize a melody in C, F or G major.	F4b
6.	Demonstrate ability to follow a three part score using bass and treble clefs.	F4b
7.	Compare two works representing different style periods.	F4b
8.	Perform a notated composition including meter changes involving meters in 5, 7 and 9.	F4b
9.	Identify score notation of rhythmic augmentation and diminution.	F4b
10.	Create and notate a rhythmic composition.	F4b
11.	Explain the use of tempo(s) to provide unity and/or contrast within a composition.	F4b
12.	Interpret tempo rubato.	F4b
13.	Explain the use of dynamics as a device providing unity and/or contrast in a composition.	F4b
14.	Explain the use of timbre to provide unity and contrast within a composition.	F4b

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	NCEO CODE
AREA OF STUDY: INSTRUMENTAL MUSIC--STRINGS IV, LEVELS 7/8-12	
This level of study provides further development of playing skills, e.g., double stops, vibrato, finger positions. The Learner Will:	
1. Play melodies which, because of extended range or convenience of finger patterns, require the use of positions other than first. (These positions are different for the various stringed instruments. Thus they need to be specified for Level IV as follows:	F4b
Violin--3rd position	F4b
Viola--3rd position	F4b
Cello--1/2, 2nd, 3rd, and 4th positions and extensions,	F4b
Bass--1/2, 2nd, 3rd and 4th positions and extensions).	F4b
2. Play at sight melodies which, because of extended range or convenience of finger patterns, require the use of positions other than first. (These positions are different for the various stringed instruments. Thus, they need to be specified for Level IV as follows:	F4b
Violin- 3rd position	
Viola- 3rd position	
Cello- 1/2, 2nd, 3rd, and 4th positions and extensions,	
Bass- 1/2, 2nd, 3rd and 4th positions and extensions).	
3. Play melodies in major keys up to and including 3 sharps and 3 flats.	F4b
4. Play major scales through 3 sharps and 3 flats.	F4b
5. Play harmonic minor scales through 2 sharps and 3 flats.	F4b
6. Identify harmonic minor melodies.	F4b
7. Play grace notes.	F4b
8. Play unisons and octaves formed with one open string and one string fingered in third position.	F4b
9. Play sixths in first position (exclude basses).	F4b
10. Perform using spiccato bow strokes.	F4b
11. Perform using martelé bow strokes.	F4b
12. Participate in the performance of a round (using first and third positions; cellos and basses in fourth positions).	F4b
13. Identify a rondo.	F4b
14. Perform meter in 5.	F4b
15. Perform meter in 9.	F4b
16. Play syncopated rhythm patterns.	F4b
17. Play at sight pieces marked largo.	F4b
18. Interpret music using contrasting dynamics: *pp, p, mp, mf, f, ff.*	F4b
19. Play melodies using both resonant and intense tone qualities.	
20. Play melodies with vibrato.	F4b
21. Demonstrate characteristics of good ensemble playing.	F4b
22. Play a melody *con sordino*.	F4b
AREA OF STUDY: INSTRUMENTAL MUSIC--WINDS AND PERCUSSION, LEVELS 7/8-12	
This level of study provides for the further development of playing skills, e.g., additional fingerings, sight reading, articulation. Ensemble playing is introduced. The Learner Will:	
1. Play at sight melodies in the concert keys of C, G, F, B flat, E flat, and A flat.	F4b
2. Notate and play the concert C, G, F, B flat, E flat and A flat major scales.	F4b
3. Perform at sight a harmonic minor melody.	F4b
4. Notate and play minor scales.	F4b
5. Play a chromatic scale.	F4b
6. Interpret a modulation at sight.	F4b
7. Identify a coda.	F4b
8. Play meter in 5.	F4b
9. Perform at sight music containing syncopation.	F4b
10. Play a flam paradiddle (flamadiddle) (percussion only).	F4b

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11. Play a single drag (percussion only).	F4b
12. Play "Lesson 25" (percussion only).	F4b
13. Play a double drag (percussion only).	F4b
14. Play in tempo adagio and tempo moderato.	F4b
15. Interpret accelerando.	F4b
16. Interpret the dynamic markings pianissimo, piano, mezzo piano, mezzo forte, forte and fortissimo in musical performance.	F4b
17. Demonstrate crescendo and decrescendo.	F4b
18. Demonstrate characteristics of good ensemble playing.	F4b
AREA OF STUDY: CHORAL MUSIC II, LEVELS 7-12	
This level of study provides for the further development of music reading skills, vocal techniques and ensemble singing, e.g., balance, blend, intonation, resonance. The Learner Will:	
1. Sing major and perfect intervals.	F4b
2. Sing minor scales.	F4b
3. Perform a minor melody.	F4b
4. Sing with proper use of metrical and textual accents.	F4b
5. Sing at sight a two-part choral composition is a major key.	F4b
6. Sing three-part songs from score notation.	F4b
7. Sing arpeggiated major and minor triads.	F4b
8. Identify major and minor triads presented aurally.	F4b
9. Participate in the performance of a canon.	F4b
10. Describe the construction of a canon.	F4b
11. Participate in the performance of a spiritual.	F4b
12. Identify three characteristics of the spiritual.	F4b
13. Demonstrate the phrase structure of a composition using proper breathing.	F4b
14. Perform at sight rhythm patterns in 6/8 meter.	F4b
15. Perform a syncopated ostinato.	F4b
16. Perform at sight a rhythm pattern containing meter changes with the beat remaining constant.	F4b
17. Demonstrate the tempo markings adagio, moderato and allegretto.	F4b
18. Interpret the marking accelerando (accel.).	F4b
19. Interpret the symbols pp and ff (pianissimo and fortissimo)	F4b
20. Sing a sustained pitch using crescendo and descrescendo.	F4b
21. Demonstrate good tone production in singing two- and three-part songs.	F4b
PHYSICAL EDUCATION PROGRAM OF STUDY, MIDDLE CHILDHOOD EDUCATION, LEVEL 8	
This area of study relates to the basic concepts of personal fitness, skills, and knowledge of strategies and rules for (safe) participation in recreational activities, including dance and individual, dual, and team sports.	
Learning Outcomes--The Learner Will:	
1. Improve on prior performance on a four component fitness test for flexibility, cardiovascular endurance, strength and body composition.	C3
2. Develop a personal fitness program.	C1b
3. Demonstrate correct usage of upper body, abdominal and leg strength in relation to personal fitness.	C1b
4. Demonstrate correct usage of flexibility exercises toward personal fitness.	C1b
5. Analyze the relationship between body composition and personal fitness.	C1b
6. Apply cardiovascular endurance activities to personal fitness.	C1b
7. Extend and improve previously learned motor skills and patterns .	C3
8. Demonstrate skills in individual and dual sports.	C1b
9. Demonstrate knowledge of rules in individual and dual sports.	F4
10. Perform sequential tumbling routine patterns.	C3

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11. Demonstrate team sports skills.	C1b
12. Demonstrate knowledge of rules in team sports.	F4
13. Demonstrate knowledge of more than one defense and offense in team sports.	F4
14. Perform sequential skills safely while using gym apparatus.	C3
15. Demonstrate social/contemporary dances.	F4b
16. Demonstrate outdoor recreation skills.	C1b
SCIENCE PROGRAM OF STUDY	
COORDINATED AND THEMATIC SCIENCE, (COORDINATED SCIENCE) FIFTH--EIGHTH	
1.0 NATURE OF SCIENCE	
To develop an understanding of the nature of science.	F4a
1.1 Acquire a conceptual framework of scientific principles.	F4a
Recognize the interdependency of science themes and scientific concepts.	F4a
Cultivate an appreciation of the relationships among all disciplines.	F4a
1.2 Reflect on and clarify the interrelationships of scientific concepts to everyday life.	F4a
Make informed decisions using scientific reasoning and knowledge.	F4a
Make informed choices about careers in science and technology.	A2f, F4a
1.3 Extend their natural curiosity by using scientific attitudes in the critical thinking processes.	F2a, F4a
Apply skepticism, careful methods, logical reasoning, and creativity in investigating the observable universe.	F2a, F4a
Recognize and appreciate the importance of the changing nature of science.	F4a
1.4 Create a holistic view of scientific knowledge.	F4a
Integrate reading, writing, mathematics, and other disciplines with the science curriculum.	F4a
Recognize that technology evolves through the advancements of science.	F4a
1.5 Stimulate a sense of wonder about the natural world and the joy of discovery.	F4a
Recognize that the exploration of science is challenging and fulfilling.	F4a
Establish patterns of lifelong curiosity and learning.	F4
2.0 SCIENTIFIC ATTITUDES/HABITS OF MIND	
To cultivate scientific attitudes and values, to develop an understanding of the limits of science, and to evaluate scientific advances and technological applications as they impact society.	F4a
2.1 Becoming actively involved in the joy of discovery.	A2a, F4a
Collaborate and cooperate with others to ask questions, to find answers and solve problems.	F2a, F4a, G4b
Appreciate scientific investigations.	F4a
2.2 Be open to new ideas.	F4a
Build upon their prior experiences and knowledge.	F4a
Process and integrate new experiences.	F4a
Formulate new knowledge.	F4a
2.3 Accept the open-endedness of scientific experimentation.	F4a
Understand that discovery is a change process.	F4a
Recognize that scientific findings are not always definite or complete.	F4a
2.4 Establish habits of close observation, perseverance, and integrity in gathering data and drawing conclusions.	D3e, F4a
Demonstrate honesty and objectivity.	F4a
Appreciate logical reasoning and order.	F4a
Display informed skepticism.	F4a
3.0 SCIENTIFIC PROCESSES/THINKING SKILLS	
To develop thinking skills and processes for investigating the world, solving problems, and making decisions.	F2a, F4a

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3.1	Demonstrate the scientific processes including recognition, application, classification, quantification, interpretation, prediction, hypothesis formation, and experimentation.	F4a
	Recognize and apply facts, concepts, laws, and theories to explain phenomena.	F4a
	Classify objects, actions or phenomena according to similarities and differences.	F4a
	Construct charts, graphs, and tables to organize data.	F4a
	Use inferential reasoning to make logical conclusions from collected data.	F4a
	Formulate questions that lead to further investigations.	F4a
	Utilize science projects to learn and demonstrate scientific processes.	F4a
3.2	Develop rational thinking processes that underlie scientific approaches to problem solving.	F2a, F4a
	Employ critical-thinking skills in applying scientific knowledge and processes.	F2a, F4a
	Use imagination and creativity in solving problems.	F2a, F4a
	Utilize science projects to learn and demonstrate scientific processes.	F4a
3.3	Develop fundamental skills in the use of laboratory materials and equipment.	F4a
	Communicate and interpret scientific data and information.	F1, F4a
	Demonstrate proper lab safety.	C2a, F4a
4.0	**LABORATORY INVESTIGATIONS/HANDS-ON LEARNING**	
	To acquire skills for learning through concrete manipulation of the tools and materials of science.	F4a
4.1	Use scientific instruments and materials to investigate the natural world.	F4a
	Demonstrate the ability to use materials (laboratory, household, natural objects, etc.) to understand and explain science concepts.	F4a
	Conduct explorations and investigations in a variety of settings.	F4a
4.2	Demonstrate safe and proper techniques for handling, manipulating, and caring for science materials and equipment.	C2a, F4a
	Develop the proper techniques for handling, manipulating and caring for science materials and living organisms.	C2a, F4a
	Practice proper laboratory safety.	C2a, F4a
4.3	Engage in active inquiries, investigations and hands-on activities for a minimum of 50% of the instructional time.	A2a, F4a
	Realize that hands-on activities lead to development of scientific concepts.	A2a, F4a
	Participate in open-ended investigations.	A2a, F4a
	Regularly participate in hands-on activities that develop laboratory skills.	A2a, F4a
5.0	**SCIENCE CONTENT**	
	To integrate the fields of science and establish connections with other discipline areas and daily life experiences.	F4a
5.1	Develop through the study of interdependent themes including systems, changes, and models an understanding of biological, earth/space, and physical science concepts.	F4a
5.2	Associate hands-on activities to daily life experiences.	F4a
5.3	Express ideas that illustrate the relevancy of science, technology, and societal issues within the lessons.	F4a
5.4	Experience the developmental continuum of science from elementary to secondary levels.	F4a
5.5	Formulate and internalize the conceptual themes of science through interrelating conceptual patterns.	F4a
	EIGHTH GRADE SYSTEMS	
	The learner will investigate and apply:	F4a
	Variations in types of skeleton, muscular, and integumentary systems in organisms.	F4a
	Effects of human existence on the biosphere.	F4a
	Properties of elements, compounds and mixtures.	F4a
	Properties of acidity, conductivity and solubility to classify substances.	F4a
	Properties of substances and environmental impact.	F4a
	Newton's Laws of Motion	F4a
	Refraction and reflection of light.	F4a

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Criteria to characterize renewable and nonrenewable resources.	F4a
Principles of plate tectonics.	F4a
Energy transfer in the earth sciences.	F4a
Principles governing the quality and quantity of surface and ground water.	F4a
Interactions of the atmosphere and oceans.	F4a
Societal effects of meteorological phenomena.	F4a
Factors of mining resources.	F4a
Galactic systems and their components.	F4a
CHANGES	
The learner will investigate and apply:	F4a
Fundamentals of genetics.	F4a
Adaptations of organisms to their habitat.	F4a
Cyclic role of decomposition and waste disposal.	F4a
How waves travel through different materials.	F4a
Effects of individual and societal behaviors on environments.	F4a
Forces causing the construction and destruction of topographical features.	F4a
Weather observations to make weather predictions.	F4a
MODELS	
The learner will investigate and apply:	F4a
Models comparing variations in skeletal, muscular, and integumentary systems of organisms.	F4a
Sampling techniques involved in data collection.	F4a
Methods of classifying common organisms by observable characteristics.	F4a
How to illustrate the path of waves traveling through different materials.	F4a
How to represent forces as vectors.	F4a
How models illustrate technological principles (communication, construction, manufacturing, and transportation).	F4a
Stratigraphic interpretations.	F4a
Causes of geological phenomena.	F4a
Concerns with the explorations and colonization's of space.	F4a
6.0 SCIENCE HISTORY	
To develop relationships between scientific milestones and how these milestones influence current scientific thought.	F4a
6.1 Articulate the historical context in science.	F4a
Understand that scientific discoveries are influenced by technological demands, competition, controversy, world events, personalities, and societal issues.	F4a
Trace evolution of science concepts.	F4a
Identify similarities in the evolution of science concepts.	F4a
Understand that scientific discoveries can create global and economic ramifications.	F4a
Understand that men and women from diverse cultures have contributed to the development of science.	F4a
7.0 SCIENCE, TECHNOLOGY, AND SOCIETY	
To develop an understanding of the relationship of science and technology in the context of society.	F4a
7.1 Personalize the applications of science and technology.	F4a
Develop an understanding of the science and technology experienced in daily living.	F4a
Utilize their knowledge of science and technology in personal decision making.	F4a
Engage in activities to help resolve a local science-technology-society issue.	F4a
Evaluate mass media reports of scientific developments and events.	F4a
Recognize that science and technology provide skills and tools for dealing with global and local problems.	F4a

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7.2 Explore the connections among science, technology, society, and career opportunities.	A2f, F4a
Describe the costs and benefits of new technologies.	F4a
Recognize that societal decisions influence the advancement and development of science and technology.	F4a
Recognize that scientific knowledge, thinking processes, and skills are used in careers.	F4a
Explore careers in science and technology.	A2f, F4a
SOCIAL STUDIES PROGRAM OF STUDY	
WEST VIRGINIA STUDIES, LEVEL EIGHT--1ST SEMESTER	
The Learner Will:	
1. Understand the concept of geographic regions and demonstrate a knowledge of geographical regions within and extending across West Virginia's borders.	F4a
2. Describe the influence that geographic features have played in the development of the state.	F4a
3. Give characteristics of the various cultures during the Pre-Columbian period.	F4a
4. Analyze the political process related to the formation of West Virginia.	F4a
5. Demonstrate knowledge of reasons for the development of the West Virginia transportation system.	F4a
6. Demonstrate the role of folklore and myths as they relate to culture. Understand the different roles that male and females play in these stories.	F4a
7. Analyze the impact of industrial and agricultural development on West Virginia.	F4a
8. Explain the development of education in the state.	F4a
9. Trace the history of the labor movement in West Virginia and analyze the role of unions. Include, but do not limit to, Hawk's Nest, Battle of Blair Mountain, Matewan Massacre, Mannington and Farmington disasters, provision of medical benefits, black lung legislation, and Mother Jones.	F4a
10. Describe the diversity of the population of West Virginia as it relates to religion, arts and crafts, recreation, ethnic origin, and race.	F4a
11. Demonstrate a knowledge of the geographic factors promoting the development of the coal, glass, chemical and metallurgical industries.	F4a
12. Evaluate present and future career opportunities in West Virginia. Be knowledgeable of the different roles and opportunities which have been available to men and women in the private and public sectors, including both high-tech and service areas such as coal, tourism, and government. Understand what impedes and enhances equality in employment.	F4a
13. Give examples of men and women in West Virginia who have made significant contributions both in public and private sectors.	F4a
14. Demonstrate knowledge of the interaction of state government and West Virginia citizens in meeting the needs and wants of citizens.	F4a
15. Analyze the relationship of West Virginia with the nation and the world.	F4a
16. Demonstrate adequate reading and writing skills through exposure to various media resources and techniques.	F3b, F3c, F4a
17. Implement a decision making process.	F2a, F4a
FOUNDATIONS OF DEMOCRACY, LEVEL EIGHT--2ND SEMESTER	
This area of study examines the structure, functions and processes of national, state and local governments and the responsibilities and rights of citizenship. Concepts include political process and structure, democracy, separation of power, checks and balances, executive, legislative and judicial branches. The Learner Will:	
1. Identify the weaknesses in the Articles of Confederation and explain how they led to the formation of the Constitution.	F4a
2. Relate the development, function, and importance of the Constitution. Illustrate the concept of power of government derived from the governed.	F4a
3. Have knowledge of three branches of government: executive, legislative, and judicial, and describe the concepts of "separation of powers," "checks and balances," and "judicial review."	F4a
4. Analyze how the Constitution has changed formally and informally over time.	F4a

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5. Compare and contrast the structure and fun[illegible]n among national, state, and local governments and analyze the relationship among them.	F4a
6. Analyze the role of special interest groups and lobbyists in government.	F4a
7. Understand issues surrounding censorship and freedom of the press.	F4a
8. Demonstrate the relationship between the media and government in a democracy.	F4a
9. Justify the value and necessity of ethics in the political process of a democracy.	F4a
10. Explain the concept of universal suffrage and the value of participatory democracy; understand the long, and sometimes violent, battle to include blacks and women in the democratic process.	F4a
11. Explain reasons for different types of elections (e.g., primary, general, special, recall, initiative, referendum).	F4a
12. Trace the development of political parties and explain the role they play in a democratic society.	F4a
13. Analyze the relationship between government and economic factors.	F4a
14. Describe the role of government in the formation of domestic and foreign policy.	F4a
15. Demonstrate adequate reading and writing skills through exposure to various techniques and media resources.	F4a
16. Develop an appreciation of the American flag as a symbol of the United States.	F4a
17. Demonstrate knowledge of meaning of symbols of the United States, i.e., flag, seal, Declaration of Independence, Statue of Liberty, and Constitution.	F4a
18. Implement a decision-making process based on research.	F4a